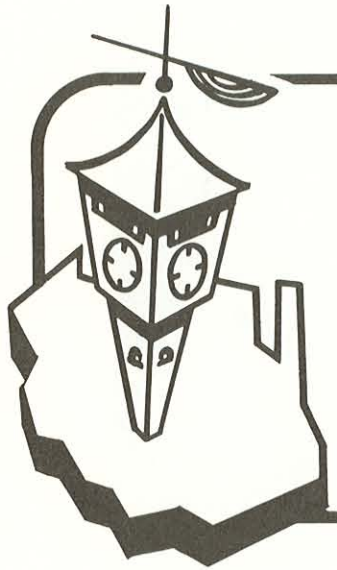
Graduate Bulletin
1971-72

STOUT STATE UNIVERSITY

DEGREE PROGRAMS OFFERED

Master of Science	Audio-Visual Communications
	Guidance
	Home Economics — Clothing and Textiles
	Home Economics — Food Science and Nutrition
	Home Economics Education
	Industrial Education
	Industrial Technology
	Vocational Education
	Vocational Rehabilitation
Master of Science in Education	School Psychology
Education Specialist	Industrial and Vocational Education



Graduate College

Catalog of Courses
1971-1972

Stout State University
Menomonie, Wisconsin 54751

Volume LVII

Entered as Second Class Matter
at the Post Office at Menomonie,
Wisconsin under Act of Aug. 1912.

10000 — 24

Quarterly. Address change notices
should be sent to Office of
Admissions, Stout State University.

CONTENTS

General Information

Degree Programs and Requirements

Course Descriptions

GENERAL INFORMATION

Graduate Administration

History

Facilities

The Graduate College

Admission Procedures

Graduate Student Status

Degree Progress

Academic Information

Fees

Financial Aids

Off-Campus Programs

Housing

Special Services

GRADUATE ADMINISTRATION

William J. Micheels ..... President of the University
Stout State University, B.S.; University of Minnesota, M.A., Ph.D.

John A. Jarvis ..... Vice President for Academic Affairs
University of Wisconsin, B.S. in Mechanical Engineering; Stout State University, B.S.; Wayne State University, M.Ed.; University of Minnesota, Ph.D.; Registered Professional Engineer

Robert Swanson ..... Dean of The Graduate College
Stout State University, B.S., M.S.; University of Minnesota, Ph.D.

G. S. Wall ..... Director of Admissions
Winona State College, Diploma; University of Minnesota, B.S., M.A., Ph.D.

E. Wayne Courtney ..... Assistant Dean of the Graduate College
Purdue University, B.S., M.S., Ph.D.; Oregon State University, Post Doctoral Study

Program Directors

James R. Daines ..... M.S. in Audio-Visual Communications
Stout State University, B.S., M.S.; University of Michigan, University of Houston, University of Missouri, Ed. D.

Michael D. Ritland ..... M.S. in Guidance
Luther College, B.A.; Colorado State College, M.A., Ed.D.

Rita Todd Mahan ..... M.S. in Home Economics — Clothing and Textiles
Stout State University, B.S., M.S.; University of Wisconsin, Graduate Study

Lorraine C. Dahlke ..... M.S. in Home Economics — Food Science & Nutrition
University of Wisconsin, University of Minnesota, B.A.; State University, Iowa City, M.S.; Ohio State University, Ph.D.

Jane Rosenthal ..... M.S. in Home Economics Education
Stout State University, B.S., M.S.; Colorado State University, Ed.D.

Lawrence S. Wright ..... M.S. in Industrial Education
Stout State University, B.S., M.S.; University of Missouri, Ed.D.

Raymond L. Keil ..... M.S. in Industrial Technology
Bradley University, B.S.; University of Arkansas, M.Ed.; Michigan State University, Ph.D.

Harold Halfin ..... M.S. in Vocational Education
Fairmont State College, A.B.; Stout State University, M.S.; University of West Virginia, Graduate Study

Walter A. Pruitt ..... M.S. in Vocational Rehabilitation
University of Denver, B.A., M.A.; Colorado State College, Ed.D.

Robert Wurtz ..... M.S. in Ed. — School Psychology
Rockhurst College, B.S.; University of Wyoming, M.A.; Kansas State University, University of Wyoming, Ph.D.

Harold Halfin ..... Ed.S. in Industrial and Vocational Education
Fairmont State College, A.B.; Stout State University, M.S.; University of West Virginia, Graduate Study

HISTORY

The heritage of Stout State University is linked to the career, foresight, and generosity of Senator James H. Stout, pioneer Menomonie lumberman. Senator Stout's respect for acquired skill prompted him to establish a program of manual training and domestic science in the Menomonie grade and high schools in 1891.

The program soon outgrew the facilities, however, and by 1893, new buildings were added. The Stout Manual Training and Domestic Science School, a part of the public school system, remained under the patronage of Senator Stout.

Guided by President Lorenzo Dow Harvey, who was appointed in 1903, the school grew and in 1908 changed its name to The Stout Institute as an independent corporation. Three years later and one year after the death of Senator Stout, the institute was put under control of a board of trustees appointed by the state of Wisconsin.

With state support, The Stout Institute continued to progress in the pattern envisioned by its founder. In 1917, state legislative action made it a degree-granting college. Evolution continued under the leadership of President Harvey and Burton E. Nelson; in 1935, The Stout Institute was authorized to offer graduate study and to grant the master of science degree.

Dr. Verne C. Fryklund became president of the college in 1945. In 1955, the school became Stout State College and was placed under the jurisdiction of the Board of Regents of Wisconsin State Colleges. Dr. Fryklund guided the college through the period of burgeoning enrollment immediately after World War II and saw it well into a major building program before he passed the responsibility in 1961 to Dr. William J. Micheels, an alumnus of The Stout Institute, who became the college's fourth president. In 1964, the college became Stout State University. Building is continuing and prospects for enrollment show a rising curve, but the University remains remarkably true to the purposes Senator Stout espoused.

One of nine state universities, Stout overlooks scenic Lake Menomin in Menomonie, a pleasant city with a population of 11,000. Menomonie is located on Interstate 94, an hour by automobile from Minneapolis and St. Paul, and 30 minutes from Eau Claire.

FACILITIES

Library: The Robert L. Pierce Library, which has just occupied an addition that triples its original area, has a book collection in excess of 100,000 volumes; 50,000 items of microtext; and receives over 1,300 periodical titles. The greatest strengths of the collection continue in the fields of Stout's historic specialization in home economics, industrial and vocational education. However, broadening curriculums have required a broadening library collection, numerically and in depth, to support new majors. University status puts important new demands on the collection, with the result that it is experiencing a period of unprecedented expansion.

Laboratories and Equipment: The laboratories for the teaching of industrial subjects are well-equipped and modern. The Science and

Technology building is devoted to laboratories containing complete equipment for elementary and advanced classes in building construction, wood technics, plastics, industrial graphics, chemistry, biology, and mathematics. Bowman Hall contains labs equipped for work in graphic arts, and audio-visual communication and photography as well as laboratories and lecture rooms for courses in the arts and sciences. Fryklund Hall, constructed in 1961, contains metal-working and auto mechanics labs, electronic laboratories, a general industrial arts lab, the music department, and classrooms.

The home economics laboratories in Harvey Hall are completely modern and well equipped. Laboratories used for home furnishings, child development, food science and nutrition, clothing and textiles, home economics education, and the sciences are housed in this building. Adequate lighting and modern furnishings and equipment allow effective instruction in pleasant comfortable surroundings.

Student Center: The Memorial Student Center's informal atmosphere provides for the rich and enjoyable experiences of lectures and cultural events, social programs and informal gatherings. Included in the center are a snack bar, ballroom, offices, bookstore, meeting rooms and a recreation room which features the latest in bowling and recreational equipment.

Other facilities on the 96 acre campus include a new dining hall, resident halls for more than 3,000 students, athletic field, a new Health and Physical Education Center and the Harvey Hall auditorium. Two new facilities — a home economics building and a fine arts building — are in the early stages of construction.

THE GRADUATE COLLEGE

Accreditation: The graduate program at Stout State University is fully accredited by the North Central Association of Colleges and Secondary Schools (NCA) and the National Council for the Accreditation of Teacher Education (NCATE) to offer work at the master's (fifth year) and education specialist (sixth year) levels.

Organization: Stout State University's academic organization includes four schools and a graduate college.

The Graduate College is organized to serve the student in reaching his goal — earning a graduate degree or extending his education at the graduate level. It is a distinct administrative unit which offers programs which are served by the course offerings of the Schools of Applied Science and Technology, Home Economics, Education, and Liberal Studies.

The Graduate College consists of an administration, a graduate council, a director and committee for each degree program, and the graduate faculty drawn from the several schools. The graduate council makes policy which is administered by the dean and staff. Each program is organized and operated by a program director and a program committee. Courses are taught by the graduate faculty through the departments of the four schools.

Functions: Stout State University serves three broad functions: instruction, service, and research. As a part of the University, the Graduate College contributes to each function.

INSTRUCTION: The Graduate College offers programs for the preparation of professional personnel in the areas of audio-visual communications, guidance, clothing and textiles, food science and nutrition, home economics education, industrial education, industrial technology, vocational education, vocational rehabilitation, and school psychology. Common to all programs is the development of competencies in applied research. Continuing education beyond the bachelor's level for other than degree purposes is a part of the college's function as well.

SERVICE: The service function involves consultation to education, business, and industry in the areas of the college's degree programs. Included also are such activities as sponsored workshops, publications, surveys and research, and participation as committee members and officers in appropriate local, state and national organizations.

RESEARCH: Research and scholarship by the faculty and staff are encouraged to constantly add to the bodies of knowledge on which the college's programs are based. Studies of teacher education problems, technological developments, curriculum development procedures, field surveys, and experimental projects are reported in professional literature and to professional organization. Consultation on research design is offered.

ADMISSION PROCEDURES

All students wishing to be awarded graduate credit (either for degree or non-degree purposes) must be admitted to The Graduate College. The admission procedure is as follows:

(1) **Apply for admission,** using the Application for Admission (GC 111) included in this bulletin. Application should be made 30 days in advance of registration.

(2) **Supply evidence of bachelor's degree:**
   (a) Program students (those seeking degrees) request that transcripts of all previous college work be forwarded to the Dean of the Graduate College by the registrar of the college(s) where the work was completed.
   (b) Non-program students submit Registrar's Form (GC 114), available from the Graduate College Office, certifying that they hold a bachelor's degree.
   (c) Students admitted to a graduate program at another college who wish to earn graduate credit for transfer to that program should submit a Guest Matriculant Form (GC 113) available from the Graduate College Office.

(3) **Supply supporting statements** of qualification for graduate study. The director of the appropriate degree program may require statements of the student's qualifications. In such cases, the director will send appropriate forms.

Within 30 days of receipt of the above materials, the student will be informed of his classification and status.

CLASSIFICATION AND STATUS

Classification: All admitted students receive one of two classifications in terms of their objectives:

(1) Program Students
(2) Non-program Students

Status: Program students are further designated by status.

(a) FULL STATUS: Granted to applicants if they have at least a 2.75 grade point average (based on a four point system) and the undergraduate pattern of work required in the graduate program. Full status is also granted to applicants who had at least a 2.90 grade point average in the last two years of undergraduate work. Full status may be changed to probational status if a student fails to maintain a 3.0 average in his first term.

(b) PROBATIONAL STATUS: Granted to applicants if they have an undergraduate grade point average less than 2.75 but not less than 2.25. A probational student may be dropped if he fails to earn a 3.0 average in his first term.

(c) PROVISIONAL STATUS: Granted to applicants seeking a degree if they meet the grade point requirement for graduate work but do not have the pattern of work required by the graduate program. A provisional student may be required to make up undergraduate deficiencies and/or take additional graduate coursework to earn a degree.

(d) TRIAL STATUS: Granted to applicants if they have an undergraduate grade point average less than 2.25. Such students take a trial block of credits in which they must earn an average of "B" or better to gain probational status. Work earned while on trial status will generally be in addition to degree requirements.

(e) SPLIT PROGRAM STATUS: Granted to applicants during the term in which they will complete their bachelor's degree if they require less than a full undergraduate load. Total of undergraduate and graduate work may not exceed 16 credits.

DEGREE PROGRESS

Procedures are developed to facilitate orderly progress towards the degree. Each student is assigned an advisor who aids him in his plans, but each step is the responsibility of the student. A chart summarizing various details is in the back of this bulletin for handy reference.

Program Plan: Requirements for each program are outlined in this bulletin; the student should study them and plan a schedule accordingly. At the first enrollment, each student will make a program plan sheet with his advisor; this may be revised subsequently but should serve as a guide to each enrollment.

Examinations: (1) All student are required to complete the general aptitude section of the Graduate Record Examination, prior to or during their first term of enrollment. This examination is given at a number of test centers (Stout is one) on only certain dates each year. Information is available in the Graduate Office on dates and procedures. (2) A qualifying examination, generally prior to or as a part of degree candidacy, may be required in specific degree programs. (3) All international students are required to complete the Test of English as a Foreign Language (TOEFL), prior to admission.

Registration for Classes: Ordinarily, there is a preregistration for each term approximately six weeks in advance. A day or two at the beginning of each term is also set aside for this purpose. Summer session preregistration may be accomplished by mail. The student should carefully check his proposed program against his program plan; his advisor's signature is also required.

Degree Candidacy: When nine graduate credits have been completed at Stout, the student applies for degree candidacy on a form available in the Graduate Office. Enrollment for the last six credits of the program are not permitted until candidacy is granted. The following requirements are involved: (1) At least nine graduate credits at Stout. (2) An overall graduate grade point average of at least 3.0. (3) Scores received in the Graduate Office for the Graduate Record Examination, general aptitude section. (4) Satisfactory performance on any qualifying examinations specific to the program.

Research Project: Each degree program requires some kind of research or scholarship project. The student should confer with his advisor early in his program to allow ample time and preparation for completion of an appropriate project.

Transfer of Credits: A student planning to transfer graduate credits from another institution to a program here should check with his advisor in advance concerning applicability of the proposed work. A form to request transfer is available in the Graduate Office. Official transfer of credits is not made prior to degree candidacy.

Intent to Graduate: Students are awarded degrees at the end of the first and second semesters and the summer session. Students planning to finish degree requirements within a given term should file an "Intent to Complete" form available in the Graduate Office.

Graduation Ceremonies: A graduation ceremony is held at the end of each semester and the summer session. Instructions for graduation will be sent to all persons who have filed an "Intent to Graduate."

Award of the Degree: After all grades and credits have been recorded (usually about two weeks after the end of each semester or summer session), the student's transcript will be checked to determine that program requirements have been met with an overall grade point average of at least "B" (3.0). The student will be mailed his diploma and a complete transcript, certifying his degree. Students needing such certification for salary purposes prior to the official statement may request a letter from the Dean of the Graduate College.

ACADEMIC INFORMATION

Academic Calendar Year: The University's academic year is divided into two semesters of 18 weeks each. Each semester is also divided into two nine week quarters. The student should recognize that the Stout designation of a quarter represents only one-half a semester

and should not be confused with the quarter system in many universities which is 12 weeks in length. Courses scheduled on the quarter basis at Stout meet twice as often each week as courses scheduled on the semester basis for the same credit.

The Summer Session: Each year Stout State University offers ten weeks of summer school. A two week presession begins immediately after the close of the regular academic year. This is followed by the regular eight-week summer session. Thus, great variety is possible in summer programs.

Credits may be earned at the rate of one semester hour per week of attendance. This makes it possible to earn as many as ten credits during a summer. Because of the large number of graduate students in attendance during the summer, practically all graduate level courses are offered each summer. The Summer Session Bulletin is published each April. It contains complete information about offerings, class schedules, enrollment procedures, degree programs, and housing. A copy will be sent on request.

Grading System: The Graduate College uses a seven step grading plan.

Grade	*Grade Point Value*	*Description*
A	4.0	Exceptional achievement at the graduate level
B+	3.5	Above average graduate level work
B	3.0	Average graduate level work
B—	2.5	Below average graduate level work
C	2.0	Acceptable graduate level work
D	1.0	Questionable graduate level work
F	0.0	Failure

An "incomplete" may be given when a student fails to complete his work. Incompletes not cleared within a year after the course would normally have been completed will be changed to "W" (withdrawn); if the student desires credit after that time, he must re-enroll for the course. This policy applies to research projects also.

Time Limits: All credits toward a degree program, including transfer credits, must have been completed within seven years of the award of the degree.

Transfer Credits: The Graduate College will accept for transfer to a degree program up to eight semester credits of approved graduate work taken through the Stout State University extension service and/or from any accredited graduate school; or will accept up to a maximum of 15 semester credits of approved graduate work taken as on-campus residence credit at any of the Wisconsin tax supported universities. In any event, the total amount of transfer work to be counted toward the degree may not exceed 15 semester credits and the work must be appropriate to the degree program.

Those students currently enrolled in a graduate degree program at Stout who desire to take work for transfer should obtain the approval of the major advisor and the dean before enrolling for such work. Official credit transfer is made at the time degree candidacy is approved. No credit toward a graduate degree will be allowed for correspondence work.

Optimum Credit Load: Usually, graduate students may take a maximum of 16 credits a semester. Students with half-time assistantships

are limited to a maximum of 11 credits a semester; quarter-time assistants are limited to a maximum of 14 credits a semester. During the summer session, the maximum credit load is an average of one semester credit a week.

Textbooks: Graduate students must supply their own textbooks. These may be purchased in the book store located in the Memorial Student Center or elsewhere as chosen by the student.

FEES

Graduate fees are set by the Board of Regents of State Universities and are subject to change. Current fees are:

	Regular Semester
Incidental Fee	
Resident (Wisconsin) full-time	$189.00
Resident, part-time, per credit	21.00
Nonresident, full-time	775.00
Nonresident, part-time, per credit	87.00
Student Activity Fee	
Full-time	25.00
Part-time, per credit	2.00
Student Center Fee	
Full-time	17.00
Part-time, per credit	1.50
Special Fees	
Late Registration	10.00
Graduation Fee	7.50

Part-time graduate students are those carrying eight credits or less in the regular session or four credits or less in the summer session. Fees for the summer session work are charged on a per-credit basis.

Split program students (eligible undergraduates carrying graduate work simultaneously) pay the applicable undergraduate fee. Any expense incurred by the graduate during the conduct of research problems — such as the printing of questionnaires and maps, typing, thesis binding, etc. — is the responsibility of the student.

Refunds: Semester Basis

100% for first week, less $20-resident and $50-nonresident
80% second week
60% third and fourth weeks
40% fifth and sixth weeks
20% seventh and eighth weeks
0% after eighth week

In determining withdrawal date, the University uses the date the student notifies the school of the withdrawal; or if the student fails to notify the school and is otherwise unable to verify date of withdrawal, the date of the request to refund should be used to determine the placement on the schedule.

Summer Session

100% first week, less $10
67% second week
33% third week

Students who enter military service by enlistment, draft or otherwise, shall receive either a full refund of fees or receive course credits for the term. Other exceptions to the above may be made upon approval of the President and the designated Board Office representative.

FINANCIAL AIDS

Several kinds of financial aids are available to graduate students who fully meet all entrance requirements. Some of these aids are designed to provide professional experience as well. Application for assistantships should be filed with the Dean of The Graduate College by March 15 preceding the academic year of planned attendance. Other inquiries for financial assistance should be made to the Director of Financial Aids. Conditions for assistantships and other aids are subject to change.

Graduate Nonteaching Assistantships: The half-time graduate assistantship requires 20 hours of professional service per week in an area related to the student's program. The student may not accept other employment during this period. A stipend of $2,500 per academic year is provided. The nonresident graduate assistant, in addition, pays only the resident incidental fee, the nonresident portion being waived. The student's scholastic load is limited to a maximum of 11 credits per semester. This ordinarily requires attendance during the summer session preceding and/or following the regular year of such service to earn the degree. Though no stipend is provided for the summer session following his assistantship, the student is exempt from nonresident tuition.

The quarter-time graduate assistantship requires ten hours of professional service per week in an area related to the student's program. A stipend of $1,250 per academic year is provided. The quarter-time graduate assistant pays all fees. The student's scholastic load is limited to a maximum of 14 credits per semester.

Laboratory Assistantships: The laboratory assistant teaches a laboratory or discussion session, generally about ten contact hours per week. A stipend of $2,500 per academic year is provided. The nonresident laboratory assistant, in addition, pays only the resident incidental fee, the nonresident portion being waived. The student's scholastic load is restricted to 11 credits per semester. This ordinarily requires attendance for a summer session preceding and/or following the regular year of such service to earn the degree.

Graduate Scholarships: These scholarships provide for a remission of the incidental fee for the academic year. No demand is made of the student for service to the University nor is the scholastic load restricted in any way. This award may go to holders of assistantships. Only Wisconsin residents are eligible.

Residence Hall Counselorships: Opportunity is available to a graduate student to serve as a residence hall counselor. The monetary benefit of this offsets the cost of room and board. Application for such service should be made to the Director of Student Housing.

Wisconsin State Student Loan Fund: A loan is available from the Wisconsin State Student Loan Fund for those students who are residents of Wisconsin and are in need of loan assistance. The maximum amount of such loans is limited to $1,000 for an academic year and $250 for the summer session. There is no interest charged while the borrower is in attendance at Stout. Interest at a seven percent rate is charged beginning nine months after the borrower terminates his attendance at Stout.

National Defense Student Loans: The National Defense Student Loan program is available to graduate students in need. The amount of the loan is determined by the availability of funds and the need of the student. Repayment of the loan is to be complete within a ten year period, which begins nine months after the borrower leaves Stout as a student. Interest at three percent per annum accrues at the time the repayment schedule begins. The obligation is cancelled in case of death or permanent or total disability of the borrower. Up to 50 percent of the loan may be cancelled (at a rate of ten percent of the loan per year for five-years) if the borrower becomes a full-time teacher in a nonprofit elementary, secondary, or vocational school, or higher education institution.

International Student Scholarships: Some awards are made to students from other countries who qualify for admission to one of Stout's degree programs. The award consists of exemption of approximately 90 percent of the incidental fee and nonresident tuition. Interested students should follow all degree application procedures and request an application for an international student scholarship. Applications should be received by March 15 with awards announced about April 15.

Work-Study Grants: Graduate students as well as undergraduates may apply for jobs at an hourly rate under the federal work-study program. Some positions require special financial need status.

OFF-CAMPUS PROGRAMS

Extension Program: The University offers a program of evening and Saturday morning extension classes. Credits earned through enrollment in these off-campus courses are considered as extension credits. They are transferable to Stout State University on the same basis as they are to other colleges and universities. Registration for these courses is completed at the first class meeting by the University Extended Services Director or by the instructor. Textbooks required for the class by the instructor are made available for purchase at the first class meeting.

Course numbers, titles and content are the same as those offered on the University campus. Some courses numbered 400-499 may be awarded graduate credit. Courses numbered 500-699 are open only to graduate students. To be awarded graduate credit for extension work requires that the student be admitted to The Graduate College.

Independent Studies: A flexible academic program called Independent Studies is offered by most departments to help develop students into self-directed learners. This program provides more scope and depth in the curriculum by encouraging students to: Investigate areas of

interest not currently included in the normal course offerings; study areas and develop projects which cut across course boundaries; and delve more deeply into specific parts of an existing offering.

The Independent Studies program is open to all graduate students. For each semester hour of credit, a student is expected to expend at least 54 clock hours of study. The same conditions for registration apply as for any other course. In addition, approval for an Independent Study course must be obtained. Application forms are available in the Independent Study — Field Experience Office. The study is approved by the student's advisor and the chairman of the department most closely related to the particular study area. After this approval, a faculty member is selected jointly by the student and the department chairman to act as a study advisor.

Field Experience Program: Students in some graduate programs are encouraged to obtain part of their education program off the Menomonie campus through the Field Experience Program. This program allows a student to receive academic credit for off-campus experiences and study relating to his program while employed in an approved field position. The graduate level part of the program has been specifically designed to aid in-service teachers, counselors, and administrators in using summer work experience or supervised observation of business and industry to benefit their performance when they return to their jobs in the fall. Field Experience positions must be within 300 miles of Menomonie to allow possible faculty visitations to either the field position and/or to the enrollee at their school in the fall.

All necessary forms and reports can be handled by mail and a person enrolled need not be on campus. Application must be made prior to beginning work. Further information and application forms may be secured by contacting the Independent Study — Field Experience Office.

HOUSING

Residence hall facilities are available for graduate students. It is recommended that graduate students seek accommodations in the south residence hall complex. The University currently provides residence hall accommodations for approximately 3,000 students. Students living in residence halls are required to contract for their meals in the food service facilities as provided. The meal contract plan provides for 21 meals per week

Rooms are available on the Sunday immediately preceding registration day in the fall. All rooms are assigned for the entire academic year. Each room is furnished with single beds and inner-spring mattresses, pillows, dresser, study table, chairs, study lamp, and book case. Sheets, pillow cases, drapes, and bedspreads are supplied. Currently, the semester charges, if paid in advance, for room and board (21 meals per week) are as follows:

Semester	Academic Year
$459.52	$919.04 (including tax)

Room and board payment may also be made by installments. A penalty of $5 is assessed for all late payments, whether by semester or by installment.

A $50 room deposit is required on all room reservations. The $50 deposit submitted with the residence hall application will be applied against the final payment for the second semester. Room reservations may be cancelled and the $50 deposit will be refunded provided request of such cancellation is received, in writing by the University Housing Office on or before July 15. The $50 deposit will be forfeited if cancellation is received after July 15.

If a student vacates his room in the residence hall prior to the end of his contract, the unused portion of his room and board will be refunded on a prorated basis.

Students are requested not to bring additional furniture, particularly floor lamps. Radios, phonographs, and television sets are permitted in the rooms provided the students comply with the regulations for the use of this equipment. Television sets are available for general use in the main lounge of each building.

At the present time, Stout State University has a limited number of married student apartments. There are barracks-type units with two bedrooms, a bath, kitchen alcove, living room and limited storage space. When available, these units may be rented furnished or unfurnished. Married student facilities are also available in the community of Menomonie. Married students are encouraged to obtain housing on their own in addition to seeking the assistance of the University. Inquiries for student housing should be directed to the University Housing Office.

SPECIAL SERVICES

University Counseling Center: The University's Counseling Center, located in Room 16 of Harvey Hall, is maintained to help undergraduate and graduate students obtain the maximum benefit from their university careers and to develop to the full limit of their potential. The services of the Counseling Center include vocational guidance, career information, assistance with academic problems and study habits, specialized testing, and personal counseling. Students who seek assistance are given the opportunity to work with a counselor in a confidential relationship in which they can explore their aspirations, interests, aptitudes, abilities, personal characteristics, and increase self-understanding.

Counseling is normally provided through appointment; an appointment is not necessary for the student who feels the need for immediate assistance. There is no charge for the counseling services.

Graduate students who are in doubt about their vocational future, who are experiencing academic difficulties, or who are concerned about personal problems are especially invited to contact the Counseling Center.

Health Service: The University maintains a Student Health Service facility at the extreme north end of the campus. The facility is staffed by a physician from 8 a.m. to 4 p.m. daily, five days a week. Standard examining and laboratory facilities are available. The facility is supported by a student health fee.

Recreation: Athletic and social facilities are an important part of the campus. The University provides its students with a rich and well

rounded college experience so that as they develop academic and professional competence, they also gain experience and insight into many different activities and relationships.

Athletic facilities include the Health and Physical Education Center, Nelson Field, and ten outdoor lighted tennis courts. The Center offers open recreation, intramural athletics and physical education instructional classes. The building provides courts for tennis, badminton, volleyball, basketball and archery as well as individual rooms for weight training, gymnastics and dance. A swimming pool is also located in this area. The total area is open for co-educational recreation during the regular year on Friday from 6:30 to 10:00 p.m.; Saturday from 1:00 to 5:00 p.m. and 6:30 to 10:00 p.m.; and Sunday from 2:00 to 5:00 p.m.

Lake Menomin, within the city, offers the finest in fishing, swimming, boating, canoeing and water skiing. Similar opportunities are available on the nearby lakes. Ski enthusiasts will find excellent opportunities within commuting distance. Game hunting (bird and deer) opportunities are to be found in the immediate vicinity. The Menomonie Country Club has a nine hole golf course.

Military Obligations: Men registered with the Selective Service System must keep their local boards informed of their student status if they wish to request a student deferment. The Registrar's Office provides the following services: Makes available to students applications for student deferments; keeps students informed with policies of the Selective Service System; provides Selective Service Boards with up-to-date information as requested by student to assist students in obtaining a deferment.

Menomonie maintains a unit of the Wisconsin National Guard. Many students attending Stout belong to this unit. It is possible for a man who joins a national guard unit and who then attends that unit's weekly drills to be exempt from the selective service. A student who belongs to another guard unit within Wisconsin can continue his drill in Menomonie and still maintain the military status which he had while at home. Persons in national guard units in other states can make somewhat similar arrangements.

Veterans Service: Special assistance is given veterans by the Registrar. This office provides veterans with current information on veterans affairs and maintains liaison with the Veterans Administration, Department of Veterans Affairs, and the County Veterans Service Officers.

Career Planning and Placement Services: Registration in the Career Planning and Placement Office is a requirement for graduation. Essentially, this involves completing various placement forms and securing references from a specified number of persons.

The Career Planning and Placement Office is maintained to provide service for seniors, graduate students, and alumni. The goal of the Career Planning and Placement Office is to give effective support to the placement efforts each individual is expected to make in securing the position best for him. Every effort is made to bring to the attention of candidates for placement, information about vacancies, trends in supply and demand, data about salaries and conditions of employment, and to recommend effective application techniques.

Alumni are advised to keep their placement credentials updated and to make free use of the service available to them when they desire to relocate. A form for registering for placement may be secured by writing to the Director of Career Planning and Placement Services. Other graduate students are invited to establish a placement file and to make use of the Career Planning and Placement Services when they are within one semester of meeting the requirements for graduation.

Parking: Motor vehicles may be brought on campus by students if there is a real need. Parking facilities on or near the campus are limited. Students who expect to use University-owned or controlled parking lots must register their vehicles and observe the regulations issued by the Security Office. Limited parking adjacent to the residence halls is available to those living in them. The city of Menomonie has restricted parking ordinances which limit street parking both day and night.

The Financial Aids Program: Financial aids under the supervision of the Director of Financial Aids, include loans created by the N.D.E.A. and by the state of Wisconsin. To qualify for the former, a student must be accepted or enrolled in The Graduate College and be in need of financial assistance. The maximum loan for each year is $1,000. The amount of the loan is determined by the availability of funds and the student's financial need. Applicants are invited to contact the Director of Financial Aids for further information.

DEGREE PROGRAMS AND REQUIREMENTS

Audio-Visual Communications

Guidance

Home Economics — Clothing and Textiles

Home Economics — Food Science and Nutrition

Home Economics Education

Industrial Education

Industrial Technology

Vocational Education

Vocational Rehabilitation

School Psychology

Industrial and Vocational Education

AUDIO-VISUAL COMMUNICATIONS

Master of Science Degree. To meet the growing need in education for innovation and greater efficiency in instructional technology, the Master of Science degree program in Audio-Visual Communications is designed to prepare the student for a professional career in educational media. At the completion of the program, the student will be qualified to plan, produce and utilize materials, to teach courses in Audio-Visual Communications, and to develop, supervise and administer audio-visual programs in education, industry, and government. Stout graduates are serving in such capacities throughout the United States and in foreign countries.

ADMISSION

To be admitted with full status to this program, the applicant must hold a bachelor's degree from an accredited college and have an overall grade point average of at least 2.75.

The student should possess a valid teacher's certificate or sufficient credits to qualify for a teaching certificate and two years of successful teaching experience before the degree is awarded. These requirements may be waived for those who are not seeking employment as audio-visual coordinators or directors in the elementary and secondary schools.

A deficiency in these admission requirements does not preclude admission, but it may require completion of additional undergraduate work and/or increase the amount of graduate credit required to earn the degree.

REQUIREMENTS

The requirements for this degree include: (a) Completion of at least 30 semester hours of graduate credit with an overall graduate grade point average of 3.0 or better; a minimum of 15 credits must be in courses open only to graduate students — 500-600 level. (b) Approval for degree candidacy prior to enrollment for the last 6 credits and preferably after completion of 9 credits. (c) A course distribution as outlined below:

		Credits
Preparation in Research (6-10 Cr.)		
421-540	Research Foundations	4
407-522	Problems in Audio-Visual Communications (or)	2
407-570	Thesis — Audio-Visual Communications	6
Preparation Basic to Program (14-20 Cr.)		
107-404	Elementary Photography	2
107-405	Advanced Photography	2
407-435	Film: History and Appreciation	3
407-436	Fundamentals of Motion Picture Production	3
107-445	Color Photography	2

407-460	Audio-Visual Education*	2
407-461	Preparation of Audio-Visual Materials*	2
407-493	Television Production Techniques	3
407-494	Instructional Communications Systems	2
407-530	Media Retrieval Systems	2
407-532	Planning Media Facilities	2
407-547	Communications Media Design	2
407-551	Programmed Instruction	2
407-559	Seminar in Educational Media Research	2
407-560	Educational Media Administration*	2
407-599	Independent Study	1-2
479-555	Advanced Psychology of Learning	2

Preparation for Further Individual and Professional Development
(To total 30 Cr.)

391-470	Television Programming and Performance	3
421-481	American Higher Education	2
421-500	Philosophy of Modern Education	2
421-502	Principles of Supervision	2
421-526	Administration	2
354-541	Digital Computer Programming	2
421-538	Elementary School Curriculum* (or)	2
421-439	High School Curriculum*	2
150-513	Introduction to Educational Systems Analysis	3

*Required for certification as an audio-visual coordinator in Wisconsin.

GUIDANCE

Master of Science Degree. The program in guidance provides a basic preparation and a number of emphases leading to professional employment as elementary school counselor, secondary school counselor, vocational-technical school counselor, and employment counselor. In addition, graduates of the program are presently serving in a variety of social service settings such as student personnel services in colleges, youth opportunity projects, religious work, and other areas where counseling is involved.

Persons planning to pursue this kind of work should have a sincere interest in social service and the ability to develop a helping relationship with others. Graduates seeking positions in schools should be aware of the specific education and experience requirements for certification.

ADMISSION

To be admitted with full status to this program, the applicant must hold a bachelor's degree from an accredited college and have an overall grade point average of at least 2.75.

Applicants for elementary school counseling should be certifiable elementary teachers and have at least two years of teaching experience prior to completing the master's degree. A guidance internship may be arranged in lieu of teacher certification and experience. At least one course in child psychology must be completed at the undergraduate level.

Applicants for secondary school counseling should be certifiable secondary school teachers and have at least two years of teaching experience prior to completing the master's degree. A guidance internship may be arranged in lieu of teacher certification and experience. At least one course in adolescent psychology must be completed at the undergraduate level.

Applicants for vocational-technical school counseling should be certifiable vocational-technical teachers (from any of the fields) and have at least three years of teaching experience prior to completing the master's degree.

Applicants for employment counseling need have no particular undergraduate background, but a variety of work experience is desirable. Persons with some employment counseling experience will find this program particularly applicable.

A deficiency in these admission requirements does not preclude admission, but it may require completion of additional undergraduate work and/or increase the amount of graduate credit required to earn the degree.

REQUIREMENTS

The requirements for this degree include: (a) Completion of at least 30 semester hours of graduate credit with an overall graduate grade point average of 3.0 or better; a minimum of 15 credits must be in courses open only to graduate students — 500-600 level. (b) Approval for degree candidacy prior to enrollment for the last 6 credits and preferably after completion of 9 credits. (c) A course distribution as outlined below:

Preparation In Research (6-10 Cr.)		Credits
421-540	Research Foundations	4
413-531	Problems in Counseling and Personnel Services (or)	2
421-570	Thesis — Counseling and Personnel Services	6

Preparation Basic To Program (12 Cr.)

413-475	Counseling Theory	2
479-513	Personality	2
413-490	Aptitude and Achievement Appraisal	2
413-552	Group Guidance Procedures	2
413-590	Supervised Counseling Practicum	4

Preparation In Emphases Within Program (select one emphasis)

Emphasis in Elementary School Counseling (10 Cr.)

413-429	Guidance in the Elementary School	2
421-538	Elementary School Curriculum	2
413-548	Diagnosis and Remediation of Learning Difficulties	2
413-541	Individual Mental Testing	2
413-565	Organization and Administration of Guidance	2

Emphasis in Secondary School Counseling (10 Cr.)
413-401 Introduction to Guidance and Counseling 2
413-491 Theories of Career Development 2
421-539 High School Curriculum 2
413-541 Individual Mental Testing 2
413-565 Organization and Administration of Guidance 2

Emphasis in Vocational Technical School Counseling (14 Cr.)
469-402 Principles of Vocational, Technical and Adult Education.....2
469-515 Technical Education Programs 2
413-541 Individual Mental Testing 2
413-534 Technical-Vocational Education Student 2
413-491 Theories of Career Development 2
469-592 Administration of Vocational, Technical, and Adult Education 2
421-500 Philosophy of Modern Education 2

Emphasis in Employment Counseling (6 Cr.)
413-401 Introduction to Guidance and Counseling 2
413-491 Theories of Career Development 2
413-550 Appraising the Individual 2

Preparation for Further Individual and Professional Development

While the master's degree program (especially the first three emphases) contains a large proportion of required courses, some of them may have been completed for undergraduate credit and thus will not be repeated; electives will be used to meet the minimum 30 credits required for the degree.

Of special interest to counselors in Wisconsin in elementary and secondary schools is the Professional School Counselor Life Certificate. Requirements for this certificate are met by the completion of 18 credits beyond the master's degree arranged in a logical program of specialization in counseling and guidance.

The following courses are available as electives to complete the master's degree program or the above life certificate:

Testing
413-543 Advanced Individual Mental Testing 2
413-545 Assessment of Personality 2
413-550 Appraising the Individual 2
413-548 Diagnosis and Remediation of Learning Difficulties 2

Counseling
413-690 Multiple Counseling and Sensitivity Training 2
413-695 Supervision of Counselors and Counseling 2
413-505 Play Therapy 2
413-592 Advanced Counseling Practicum 2

Vocational Guidance
413-537 Curriculum and Methods in Group Guidance 2
413-534 Technical-Vocational Education Student 2
469-402 Principles of Vocational, Technical and Adult Education.....2

Administration
413-665 Organization and Administration of Pupil Personnel Services 2

421-526 Administration 2
421-502 Principles of Supervision 2

Student Services
413-511 Introduction to Student Personnel Services 2
413-574 Supervised Internship in Student Personnel Services 6
413-549 Organization and Administration of Student Personnel Services 2

Learning Disabilities
479-432 Psychology of the Exceptional Child 2
413-547 Behavior Problems of Children 2
413-548 Diagnosis and Remediation of Learning Difficulties 2

HOME ECONOMICS — CLOTHING AND TEXTILES

Master of Science Degree. The program in clothing and textiles provides an opportunity for development of professional competencies in either clothing or textiles or in both of these areas of study. It prepares students for professional positions in business, merchandising, industry, or extension services or concentrated study in clothing and textiles for persons planning to teach at the secondary or college level. An individualized program can be planned with the major adviser.

A program may include an emphasis in either clothing or textiles with electives chosen from an area which will support the major concentration. Programs for students planning to teach will include both clothing and textiles emphasis and courses in professional education.

ADMISSION

To be admitted with full status to this program, the applicant must hold a bachelor's degree from an accredited college and have an overall grade point average of at least 2.75.

The applicant should have an undergraduate preparation of about 20 semester credits in the area of concentration; however, a general or specialized major in home economics is acceptable.

In addition to home economics majors, students from art or the physical sciences will find appropriate applications in this area.

A deficiency in these admission requirements does not preclude admission, but it may require completion of additional undergraduate work and/or increase the amount of graduate credit required to earn the degree.

REQUIREMENTS

The requirements for this degree include: (a) Completion of at least 30 semester hours of graduate credit with an overall graduate grade point average of 3.0 or better; a minimum of 15 credits must be in courses open only to graduate students — 500-600 level. (b) Approval for degree candidacy prior to enrollment for the last 6 credits and preferably after completion of 9 credits. (c) A course distribution as outlined below:

Preparation in Research (6-10 Cr.)		Credits
421-540	Research Foundations	4
214-570	Thesis — Clothing and Textiles (or)	6
214-551	Problems in Clothing and Textiles	2

Preparation in Emphases Within Program (select one emphasis)

Emphasis in Clothing (Minimum of 12 Cr.)

214-412	Draping	3
214-435	Fashion Merchandising II	3
214-439	Apparel Design	2-4
214-450	Tailoring	3
214-465	European Study Tour	3-6
214-471	History of Costume: Ancient to European 1900	3
214-475	History of American Costume	2
214-479	Recent Developments in Clothing and Textiles	2
214-480	Social Psychological Aspects of Clothing	3
214-482	Clothing and Textiles Problems	2
214-498	National Study Tour to Fashion Industry	1
214-514	Seminar in Clothing and Textiles	2
214-517	Advanced Apparel Design	3
214-544	Workshop in Clothing and Textiles	2

Emphasis in Textiles (Minimum of 12 Cr.)

214-407	Textiles II	2
214-411	Decorative Fabrics	2
214-429	Textile Economics	3
214-465	European Study Tour	3-6
214-479	Recent Developments in Clothing and Textiles	2
214-482	Clothing and Textiles Problems	2
214-514	Seminar in Clothing and Textiles	2
214-544	Workshop in Clothing and Textiles	2
214-572	Advanced Textiles	2

Emphasis in Clothing and Textiles for Teaching (18-22 Cr.)
Select 14 to 18 credits from the individual emphases above, plus at least 4 credits from education.

Preparation for Further Individual Development (To total 30 Cr.)
Students will select, in consultation with the program advisor, a minimum of 12 credits from either the clothing or textile area plus a minimum of 6 credits in supporting work related to the program emphasis. These supporting electives may be chosen from the areas of art, psychology, sociology, economics, business, chemistry, administration, communication, management, or from the area of clothing or textiles which was not selected as the program emphasis.

HOME ECONOMICS — FOOD SCIENCE AND NUTRITION

Master of Science Degree. The program in Food Science and Nutrition is organized to enable the student, in consultation with his advisor, to prepare for advanced positions in teaching, dietetics, a wide range of positions in business and industry, and for further advanced studies related to foods and nutrition.

ADMISSION

To be admitted to this program with full status, the applicant must have a bachelor's degree from an accredited college and have an overall grade point average of at least 2.75.

Students from a variety of educational backgrounds are eligible for admission. In addition to home economics majors, students from the biological, chemical, and physical sciences will find appropriate applications within the program.

A deficiency in these admission requirements does not preclude admission, but it may require completion of additional undergraduate work and/or increase the amount of graduate credit required to earn the degree.

REQUIREMENTS

The requirements for this degree include: (a) Completion of at least 30 semester hours of graduate credit with an overall graduate grade point average of 3.0 or better; a minimum of 15 credits must be in courses open only to graduate students — 500-600 level. (b) Approval for degree candidacy prior to enrollment for the last 6 credits and preferably after completion of 9 credits. (c) A course distribution as outlined below:

Preparation in Research (6-10 Cr.)		Credits
421-540	Research Foundations	4
229-570	Thesis — Food Science and Nutrition (or)	6
229-547	Problems in Food Science and Nutrition	2

Preparation in Emphases within the Program (select one emphasis)

Emphasis in Food (14-16 Cr.)

229-438	Experimental Foods	3
229-442	Advanced Food Studies	2
229-461	Social and Cultural Aspects of Foods	2
229-508	Food Seminar	2
229-530	Recent Developments in Food Science	2
229-546	Modern Methods in Food Preparation	3
229-556	Advanced Experimental Food	3-4
229-599	Independent Studies in Food Science	1

150-215 Packaging Fundamentals 2
308-406 Food Microbiology 3
311-411 Food Chemistry 3
311-450 Instrumental Methods of Analysis 3

Emphasis in Nutrition (14-16 Cr.)
229-418 Diet Therapy 3
229-433 Maternal and Child Nutrition 3
229-501 Trends in Nutrition 2
229-511 Nutrition Seminar 2
229-502 Minerals and Vitamins 3
229-529 Proteins 3
229-536 Carbohydrates and Lipids 3
229-599 Independent Studies in Nutrition 1
311-450 Instrumental Methods of Analysis 3

Emphasis in Food and Nutrition (14-16 Cr.)
Select work from the individual emphases above with a minimum of 5 credits from each.

Preparation for Further Individual Development

Electives are selected according to the candidate's background, interests and objectives. Frequently, courses are chosen from other areas of home economics, or from the following fields: audio-visual communications, biology, chemistry, education, journalism, applied mathematics, mathematics, physics, psychology, sociology or industrial management.

HOME ECONOMICS EDUCATION

Master of Science Degree. The curriculum is designed to add to the competencies of teachers, extension educators, supervisors, coordinators, administrators, curriculum consultants in business and industry and other educational workers. There is flexibility in the program to meet the individual needs and goals of the student.

ADMISSION

To be admitted with full status to this program, the applicant must hold a bachelor's degree from an accredited college and have an overall grade point average of at least 2.75.

In addition, it is recommended that the student seeking admission have a major in Home Economics Education, Home Economics or a closely related field. Applicants holding bachelor's degrees in majors other than Home Economics Education may be considered individually for admission to the program.

A deficiency in these admission requirements does not preclude admission, but it may require completion of additional undergraduate work and/or increase the amount of graduate credit required to earn the degree.

REQUIREMENTS

The requirements for this degree include: (a) Completion of at least 30 semester hours of graduate credit with an overall graduate grade point average of 3.0 or better; a minimum of 15 credits must be in courses open only to graduate students — 500-600 level. (b) Approval for degree candidacy prior to enrollment for the last 6 credits and preferably after completion of 9 credits. (c) A course distribution as outlined below:

Preparation in Research (6-10 Cr.) Credits
421-540 Research Foundations 4
442-570 Thesis, Home Economics Education (or) 6
442-575 Problems in Home Economics Education 2

Preparation Basic to Program (6-8 Cr.)
421-516 Educational Evaluation 2
421-527 Supervision of Student Teachers 2
442-508 Curriculum Studies in Home Economics 2
442-512 Home Economics for Junior High School 3
442-430 Concepts of Extension Education 3
442-544 Seminar in Home Economics Education
1. New Developments in Curriculum Construction 2
2. New Developments in Methods and Materials 2
3. New Developments in Departmental Planning 2
4. College Teaching of Home Economics 2
5. Individualized Instruction 2
6. Contemporary Issues in Home Economics Education 3
7. Auxiliary Workers in Home Economics 2

Preparation in Emphases within Program (select one emphasis)

Emphasis in Education and Psychology
421-500 Philosophy of Modern Education 2
479-513 Personality 2
479-555 Advanced Psychology of Learning 2
479-350 Adolescent Psychology (or) 3
479-352 Child Psychology 3

Emphasis in Psychology and Guidance
479-513 Personality 2
413-475 Counseling Theory 2
413-491 Theories of Career Development 2
413-552 Group Guidance Procedures (or) 2
413-490 Aptitude and Achievement Appraisal 2

Emphasis in Sociology
387-315 Sociology of the Family 3
387-350 Social Psychology 3
387-460 Juvenile Delinquency (or) 3
387-475 Sociology of Minority Groups 3

Emphasis in Vocational Coordination
421-502 Principles of Supervision 2
469-509 Problems of Teaching Vocational and Adult Education..... 2

469-510 Coordination 2
469-573 Problems in Coordination 2

Emphasis in Extension Education
391-470 Television Programming and Performance 3
326-415 Technical Writing for Home Economics 3
421-479 Public Relations 2
442-430 Concepts of Extension Education 3

Emphasis in Child Development and Family Life
212-437 Seminar in Child Development 2
212-481 Problems in Home Economics 2
212-528 Family Life Issues 2
212-542 Human Development 2

Emphasis in Clothing and Textiles
214-450 Tailoring 3
214-479 Recent Developments in Clothing and Textiles 2
214-505 Clothing Today's Family 2
214-514 Seminar in Clothing and Textiles 2

Emphasis in Food Science and Nutrition
229-501 Trends in Nutrition 2
229-508 Food Seminar 2
229-511 Nutrition Seminar 2
229-556 Advanced Experimental Foods 3-4

Emphasis in Housing and Interior Design
304-423 Problems in Interior Design 2
304-448 Housing 3
244-544 Ecology of Habitat 2
244-481 House Evaluation 2

Emphasis in Management, Economics and Equipment
244-506 Trends in Home Management 3
244-517 Family Consumer Trends 3
244-528 Contemporary Issues in Family Finances 3

Emphasis as a Generalist in Home Economics
A selection may be made from each of the home economics substantive areas listed above.

Preparation for Further Individual and Professional Development
Further individual and professional development is facilitated by a variety of electives from the courses in the areas of apparel, textiles and design; food science and nutrition; human development, family living, and community education services; habitational resources; psychology; counseling and guidance; education; art; or sociology.

INDUSTRIAL EDUCATION

Master of Science Degree. This program is especially designed for individuals with undergraduate preparation in industrial arts, American industry, industrial education, and related fields; however, it is also open to others interested in entering the industrial education field.

Specifically, the curriculum is designed to provide advanced instruction of value to: (a) Secondary school industrial arts teachers, supervisors, and administrators. (b) Junior college, college, and university industrial arts teachers, supervisors, and administrators. (c) Those desiring knowledge and competence related to American industry. (d) Those who have interest in special student groups such as the disadvantaged, the slow learner, the underachiever, the handicapped, and the gifted. (e) Those who desire vocational-industrial certification.

ADMISSION

To be admitted with full status to this program, the applicant must hold a bachelor's degree from an accredited college and have an overall grade point average of at least 2.75.

In addition, the applicant should have an undergraduate major in industrial arts education or its equivalent. This assumes preparation and certification (or eligibility for certification) for teaching industrial arts.

A deficiency in these admission requirements does not preclude admission, but it may require completion of additional undergraduate work and/or increase the amount of graduate credit required to earn the degree.

REQUIREMENTS

The requirements for this degree include: (a) Completion of at least 30 semester hours of graduate credit with an overall graduate grade point average of 3.0 or better; a minimum of 15 credits must be in courses open only to graduate students — 500-600 level. (b) Approval for degree candidacy prior to enrollment for the last 6 credits and preferably after completion of 9 credits. (c) A course distribution as outlined below:

Preparation in Research (6-10 Cr.) Credits
421-540 Research Foundations 4
449-535 Problems in Industrial Education (or) 2
449-540 Synthesis of Problems in Industry and Technology (or) 2
449-570 Thesis — Industrial Education 6

Preparation Basic to Program (8-10 Cr.)
449-504 History of Industrial Education 2
(At least two courses from:)
449-510 Curricular Innovations Affecting Industrial Arts 2
449-538 Course Construction in Industrial Education 2
421-538 Elementary School Curriculum 2
421-539 High School Curriculum 2
421-550 Curriculum Theory and Practice 2

102-500 Curriculum for American Industry 4
(At least one course from:)
421-500 Philosophy of Modern Education 2
479-555 Advanced Psychology of Learning 2
421-505 Social Thought of American Educators 2

Preparation in Emphases within Program (select one emphasis)

Emphasis in Industrial Arts Education (3 Cr.)
100-540 Introduction to Problems in Industry and Technology 1
1xx-54x Problems in Industry and Technology 2

Emphasis in American Industry (17 Cr.)
421-514 Teaching Strategies 4
449-510 Curriculum Innovations Affecting Industrial Arts 2
102-500 Curriculum for American Industry 4
102-501 Foundations of American Industry 4
102-502 Interrelationships of American Industry Concepts 3

Emphasis in Vocational, Trade and Industrial Education (6 Cr.)
469-402 Principles of Vocational, Technical and Adult Education....2
421-500 Philosophy of Modern Education 2
479-555 Advanced Psychology of Learning 2

For students planning careers in teaching, it is recommended that their technical work (graduate and undergraduate) total at least 45 semester hours. Such courses may be selected from more than 70 advanced courses in photography, electricity, electronics, graphic arts, industrial graphics, industrial management, metals, power, safety, plastics, and wood technics. Further individual and professional development is facilitated by a variety of electives from professional industrial education, education, art, science, English, mathematics, social science, and speech. Because the choice is so broad, all possibilities are not listed here. A descriptive brochure is available from the director of this program.

INDUSTRIAL TECHNOLOGY

Master of Science Degree. This program emphasizes the production aspects of industry and provides educational experiences that prepare persons for positions of major responsibility at the operational management level.

ADMISSION

To be admitted with full status to this program, the applicant must hold a bachelor's degree from an accredited college and have an overall grade point average of at least 2.75.

All candidates must have the equivalent of two years of appropriate industrial experience and hold a baccalaureate degree. Each candidate's educational background will be evaluated on its merits.

Persons holding business administration, engineering, industrial technology, or similar related undergraduate degrees are eligible for the program.

A deficiency in these admission requirements does not preclude admission, but it may require completion of additional undergraduate work and/or increase the amount of graduate credit required to earn the degree.

REQUIREMENTS

The requirements for this degree include: (a) Completion of at least 30 semester hours of graduate credit with an overall graduate grade point average of 3.0 or better; a minimum of 15 credits must be in courses open only to graduate students — 500-600 level. (b) Approval for degree candidacy prior to enrollment for the last 6 credits and preferably after completion of 9 credits. (c) A course distribution as outlined below:

Preparation in Research (6 Cr.) Credits
150-512 Systems Analysis and Design 3
150-590 Synergistic Experience: Advanced Manufacturing Systems 3

Preparation Basic to Program (10 Cr.)
150-514 Introduction to Decision Theory 3
150-520 Seminar in Industrial Operations 3
150-550 Tutorial in Industrial Operations* 2
413-690 Multiple Counseling and Sensitivity Training 2
*Should be taken during first enrollment. Faculty tutor assigned to guide student's self-development program, identifying strengths and deficiencies for further development.

Preparation for Further Individual and Professional Development
(To total 30 Cr.)
150-510 Problems in Industry and Technology — Industrial Technology 2-6
150-445 Introduction to Operations Research 3
150-442 Statistical Quality Control 3
150-470 Inventory Management 3
157-464 Numerical Control in Manufacturing 3
354-541 Digital Computer Programming 2
182-454 Industrial Safety 3
182-464 Industrial Safety Programming 3
150-450 Industrial Supervision 3
150-460 Industrial Management 2
413-491 Theories of Career Development 2
387-440 Sociology of Work 3
421-470 Conference Leading 2

VOCATIONAL EDUCATION

Master of Science Degree. The graduate program in Vocational Education is designed to increase the professional competence of those who plan to serve in a high school or post high school program as a teacher, coordinating teacher, coordinator, supervisor, local vocational education coordinator, or administrator of vocational education.

ADMISSION

To be admitted with full status to this program, the applicant must hold a bachelor's degree from an accredited college and have an overall grade point average of at least 2.75.

Applicants with undergraduate degrees and certification in the various subject areas of vocational-technical education are generally eligible.

Applicants with appropriate subject matter backgrounds but who do not have the required professional education will need to complete, for undergraduate credit, at least one appropriate methods course. This should be completed early in the program.

Applicants for the emphasis in local vocational education coordinator (LVEC) must complete, for undergraduate credit, a course in the principles, issues, and/or philosophy of vocational-technical education.

Prior to award of the degree, the student must present evidence of the necessary amount and kind of occupational experience as specified by the appropriate state certifying agency.

A deficiency in these admission requirements does not preclude admission, but it may require completion of additional undergraduate work and/or increase the amount of graduate credit required to earn the degree.

REQUIREMENTS

The requirements for this degree include: (a) Completion of at least 30 semester hours of graduate credit with an overall graduate grade point average of 3.0 or better; a minimum of 15 credits must be in courses open only to graduate students — 500-600 level. (b) Approval for degree candidacy prior to enrollment for the last 6 credits and preferably after completion of 9 credits. (c) A course distribution as outlined below:

Preparation in Research (6-10 Cr.) Credits

421-540 Research Foundations 4
469-536 Problems in Vocational Education (or) 2
469-570 Thesis — Vocational Education (or) 6
449-540 Synthesis of Problems in Industry and Technology (teaching emphasis only) 2
(note prerequisite)

Preparation in Emphases within Program (select one emphasis)

Emphasis in Teaching (6 Cr.)
469-402 Principles of Vocational, Technical and Adult Education.... 2
421-500 Philosophy of Modern Education 2
479-555 Advanced Psychology of Learning 2

Emphasis in Administration (6 Cr.)
421-500 Philosophy of Modern Education 2
469-402 Principles of Vocational, Technical and Adult Education.... 2
479-555 Advanced Psychology of Learning 2

Emphasis in Local Vocational Education Coordination — (LVEC) (18-26 Cr.)
This emphasis is the certification program for Local Vocational Education Coordinators in Wisconsin; similar positions exist in other states.
421-479 Public Relations 2
421-502 Principles of Supervision 2
421-526 Administration 2
421-533 Survey Procedures 2
413-490 Aptitude and Achievement Appraisal (or) 2
413-537 Curriculum and Methods in Group Guidance 2
469-460 Cooperative Occupational Education Programs 2
413-491 Theories of Career Development (or) 2
459-517 Occupational Analysis and Information 2
413-534 Technical-Vocational Education Student 2
421-550 Curriculum Theory and Practice 2
469-584 Internship — Local Vocational Education Coordinator (LVEC) 4-8

Preparation for Further Individual and Professional Development (To total 30 Cr.)
Further professional development may be obtained by selecting from the following:
100-510 Bases for Studying the Impacts of Industry and Technology 2
311-555 Chemistry of Industry I 4
320-510 Contemporary American Economic Problems 3
326-416 Technical Writing in Industry 3
354-541 Digital Computer Programming 2
372-505 Classical Physics in Industry 3
387-440 Sociology of Work 3
387-490 Sociological Theory 3
391-406 Speech Skills for Educators 2
407-460 Audio-Visual Communication 2
413-401 Introduction to Guidance and Counseling 2
421-505 Social Thought of American Educators 2
421-514 Teaching Strategies 4
421-441 Education Evaluation 2
421-533 Survey Procedures 2
421-539 High School Curriculum 2
421-550 Curriculum Theory and Practice 2
Persons preparing for administrative positions should select additional work from the following:
320-520 Labor and Industrial Relations 2

421-470 Conference Leading 2
421-479 Public Relations 2
421-481 American Higher Education 2
421-502 Principles of Supervision 2
421-526 Administration 2
469-460 Cooperative Occupational Education Programs 2
469-510 Coordination 2
469-592 Administration of Vocational, Technical and Adult Education 2
469-573 Problems in Coordination 2
469-558 Seminars in Vocational Education 2

Persons preparing to teach will select advanced courses in their subject field. This bulletin lists some 400 and all 500 level technical courses, but a great variety of 300-400 level (graduate-undergraduate) courses listed in the undergraduate bulletin are available for graduate credit in certain individual situations. Students are urged to investigate advanced subject matter courses suitable to their particular teaching field; in some teaching areas it may be desirable to transfer them from another institution. However, prior approval to take any course should be obtained.

VOCATIONAL REHABILITATION

Master of Science Degree. This program is designed to develop specific and general competencies required of rehabilitation specialists. The student may specialize in work evaluation or rehabilitation counseling. While both of these specialties share the basic curriculum, each specialty has its own unique courses.

The Master of Science degree program in Vocational Rehabilitation may be completed in 9 to 12 months (30 to 36 credits) depending upon the qualifications and competencies of the student. The individual course schedule is designed to meet the needs of the student and courses may be waived if the student can demonstrate the skills and knowledges the course is designed to develop.

ADMISSION

To be admitted with full status to this program, the applicant must hold a bachelor's degree from an accredited college and have an overall grade point average of at least 2.75.

It is highly recommended that the applicant have an undergraduate major in industrial education, industrial technology, home economics, occupational therapy, psychology, or sociology or a field related to these. Work experience may be considered in lieu of particular undergraduate preparation.

Further, the applicant should possess personal characteristics necessary to work with handicapped people — personal and social maturity, a combination of patience, empathy, and understanding, and an interest in the welfare of handicapped individuals.

A deficiency in these admission requirements does not preclude admission, but it may require completion of additional undergraduate work and/or increase the amount of graduate credit required to earn the degree.

REQUIREMENTS

The requirements for this degree include: (a) Completion of at least 30 semester hours of graduate credit with an overall graduate grade point average of 3.0 or better; a minimum of 15 credits must be in courses open only to graduate students — 500-600 level. (b) Approval for degree candidacy prior to enrollment for the last 6 credits and preferably after completion of 9 credits. (c) A course distribution as outlined below:

Preparation in Research (6-10 Cr.) Credits

421-540 Research Foundations 4
459-555 Problems in Vocational Rehabilitation (or) 2
459-570 Thesis — Vocational Rehabilitation 6

Preparation Basic to Program

459-517 Occupational Analysis and Information 2
459-403 Physical Disability and Work 3
459-553 Procedures of Work Adjustment 2
413-490 Aptitude and Achievement Appraisal 2
459-538 Psychological Disability and Work 3
459-585 Counseling Techniques 2
459-586 Seminar in Vocational Rehabilitation 1-2
479-433 Mental Retardation and Behavioral Disabilities 2
459-580 Administration in Work Evaluation 2
459-599 Independent Study in Vocational Rehabilitation 2-3

Preparation in Emphases within Major (select one emphasis)

Emphasis in Work Evaluation

459-523 Procedures of Vocational Evaluation 2
459-583 Internship in Work Evaluation 4-8
459-508 Practicum in Work Evaluation 2

Emphasis in Rehabilitation Counseling

459-480 Principles of Rehabilitation Counseling 2
459-509 Practicum in Rehabilitation Counseling 2
459-584 Internship in Rehabilitation Counseling 4-8

SCHOOL PSYCHOLOGY

Master of Science in Education. This program leads to all three levels of certification as a school psychologist in Wisconsin. The master's degree program provides certification at the provisional level and

involves a minimum of 36 credits. A minimum of 12 additional credits leads to certification as a School Psychologist I and a total minimum of 60 credits is required for certification as School Psychologist II.

The program is designed to develop competencies in counseling, psycho-educational assessment, diagnosis and remediation, learning, psycho-social development, mental health, education, and research.

ADMISSION

To be admitted with full status to this program the applicant must hold a bachelor's degree from an accredited college and have an overall grade point average of at least 2.75.

No specific undergraduate major is required for entry to the program; strength in the behavioral sciences is preferred, e.g., psychology, sociology, social work, education, child development. Applicants should have at least one undergraduate course or demonstrated competence in each of the following areas: child psychology, adolescent psychology, abnormal psychology, and psychology of the exceptional child.

No specific experience or prior certification is required but work experience is desirable in related areas, e.g., teaching, guidance, social work, Vista, Peace Corps. The student should enjoy working with people of all age levels and relate well to children and adolescents as well as adults.

A deficiency in these admission requirements does not preclude admission, but it may require completion of additional undergraduate work and/or increase the amount of graduate credit required to earn the degree.

REQUIREMENTS

The requirements for this degree include: (a) Completion of the preparation in research and the requirements for certification as a provisional level school psychologist (36-42 credits) with an overall graduate grade point average of 3.0 or better. (b) Approval for degree candidacy prior to enrollment for the last 6 credits and preferably after completion of 9 credits.

Preparation in Research (6-10 Cr.) Credits

421-540 Research Foundations 4
413-531 Problems in Counseling and Personnel Services (or) 2
413-570 Thesis — Counseling and Personnel Services 6

Preparation Leading to Provisional Certification as a School Psychologist (30-32 Cr.)

479-513 Personality 2
479-555 Advanced Psychology of Learning 2
413-541 Individual Mental Testing 2
413-401 Introduction to Guidance and Counseling 2
413-490 Aptitude and Achievement Appraisal 2
421-538 Elementary School Curriculum (or) 2
421-539 High School Curriculum 2

413-543 Advanced Individual Mental Testing 2
413-475 Counseling Theory 2
413-548 Diagnosis and Remediation of Learning Difficulties 2
413-590 Supervised Counseling Practicum 4
413-491 Theories of Career Development 2
413-550 Appraising the Individual (Case Study) 2
413-552 Group Guidance Procedures 2
413-545 Assessment of Personality (Projectives) 2
413-595 Clinical Practice in Educational Diagnosis I 2

Preparation for Certification as School Psychologist I (12 Cr.)

In addition to the requirements for the master's degree, the student seeking certification as a School Psychologist I must complete the following: Credits

303-420 Introduction to Cultural Anthropology 3
421-500 Philosophy of Modern Education (or) 2
421-505 Social Thought of American Educators 2
479-465 Psychology of Reading 2
421-496 Mental Health in the Schools 2
413-547 Behavior Problems of Children 2
413-595 Clinical Practice in Educational Diagnosis II 2

Preparation for Certification as School Psychologist II

To achieve certification as a School Psychologist II, a student holding certification as School Psychologist I must complete additional appropriate work to total 60 credits (including the above requirements for the master's degree and certification at the provisional and School Psychologist I levels). Included in the program will be:

413-554 Seminar in Counseling and Personnel Services 2
413-596 Internship in School Psychology 2
(May be waived for candidates with sufficient appropriate experience.)

Electives to total 60 credits selected from:

413-429 Guidance in the Elementary School 2
413-455 Human Relations in the Community 2
413-505 Play Therapy 2
413-592 Advanced Counseling Practicum 2
413-599 Independent Study 2
413-690 Multiple Counseling and Sensitivity Training 2
413-695 Supervision of Counselors and Counseling 2
421-430 Education of the Slow Learner 2
479-433 Mental Retardation and Behavior Disabilities 2
479-601 Psychology of Development 2

EDUCATION SPECIALIST DEGREE

(Industrial & Vocational Education)

Two emphases of study are available leading to an Education Specialist degree in Industrial and Vocational Education.

The program is for those who have a Master's degree in industrial arts, industrial education, vocational education or equivalent. (Equivalency meaning agriculture, business education, distributive education, home economics education, and trade and industrial education.)

Or, the program is for those who have a Master's degree and are a certified employee of a vocational-technical institute or a community college.

ADMISSION

Students seeking admission to the program should complete the following at least 30 days prior to the opening of the term in which they plan to begin their program.

1. File an application for admission to the Ed.S. program.
2. Submit a current dossier listing all pertinent biographical and educational data.
3. Complete the general aptitude test of the Graduate Record Examination (GRE) with a total score of at least 900. (Students who have previously submitted such scores need not do so again).
4. Present official transcripts of all college and university work completed certifying award of bachelor's and master's degrees in industrial education, industrial arts education, vocational education, or an equivalent field with a cumulative grade point average of at least 3.25 on a four-point scale in all **graduate** work.. Persons having master's degrees in other fields who are certified and employed in supervisory positions in vocational-technical education are also eligible for admission. Transcripts need not be submitted for work completed at Stout State University.
5. Provide evidence of at least two years of successful teaching experience and professional promise by requesting letters from at least two administrators or supervisors.

After review of the application data, the Graduate College will:

1. Assign the student program status and inform him of it immediately.
   a. **Full status** will be granted to those who meet all admission requirements.
   b. **Provisional status** may be granted to those who do not fully qualify on some requirements. At the conclusion of the first term of enrollment, the status will be re-evaluated.
   c. Admission will be **denied** students whose qualifications do not meet the requirements and if the admissions committee decides provisional status is not warranted.
2. Assign an adviser to assist in developing a degree program and registering for the first term.

DEGREE PROGRAM SUPERVISION

For the first enrollment, the student's major adviser will aid him in developing a class schedule in keeping with degree requirements. Prior to enrolling for a second term, the student will prepare a total program plan in keeping with degree requirements and his special needs.

At that time, the Graduate College will appoint a supervisory committee consisting of his major adviser and two other members of the graduate faculty.

The committee will act on the appropriateness of the student's degree program, approve his proposed field study, administer his oral comprehensive examination and recommend the award of the degree.

TEACHING EXPERIENCE

This program is designed for people in education. It is felt that coursework will be more significant for those who have some experience in teaching. Thus, no more than eight credits in the degree program may be completed prior to satisfying the requirement of two years of successful teaching experience.

REQUIREMENTS FOR AWARD OF THE ED.S. DEGREE

Prior to the award of the Ed.S. degree, the following requirements will be met.

1. Completion of an approved degree program with an overall grade point average of at least 3.25.
2. Filing of an "Intent to Graduate" at least seven weeks prior to the expected graduation date.
3. Completion of a comprehensive examination, written and oral, at least three weeks prior to graduation.
4. Filing of an approved field study report and abstract at least one week prior to graduation.
5. Recommendation for the degree by the supervisory committee.

TRANSFER OF CREDIT

A maximum of fifteen semester hours of graduate credit may be transferred to meet the requirements of the Ed.S. degree. It must be appropriate to the degree program and awarded by an institution accredited for graduate level work. All credit to be counted toward the degree must have been completed within seven years of the date the degree is awarded. Credits earned through Stout's Extension Division are considered transfer credit for this purpose.

RESIDENCE REQUIREMENTS

Candidates for the Ed.S. degree must be full-time on-campus students for at least two consecutive summer sessions (minimum of six credits per summer) or one semester (Minimum of 12 credits).

TIME LIMITS

All degree requirements, including transferred credit, must be completed within a seven-year period.

INDUSTRY AND TECHNOLOGY EMPHASIS

The Education Specialist degree program in Industrial and Vocational Education — Teaching Emphasis at Stout State University is designed for the graduate student desiring a broad educational experience leading to a professional career as a teacher of industrial and technical subjects in high schools, vocational schools, technical institutes, junior colleges, and universities.

Content for the advanced degree program will be drawn from three bodies of knowledge: (a) industry and technology, (b) applied research, and (c) professional education. Selection of these three components is based on the assumption that the holder of an advanced degree in industrial education should be a scholar in his discipline (industry and technology), capable of solution of problems through applied research techniques (researcher), and a practicing educator.

CURRICULUM

The Ed.S. degree curriculum consists of three groups of courses and/or experiences as follows: Industry and Technology, Applied Research, and Professional Education.

The industry and technology component consists of courses basic to the science of industry and technology and a field study. This component is intended to be flexible in order to afford the candidate an opportunity to broaden himself, if his prior work has been narrow or to study in depth a particular conceptual area of industry and technology if his prior work has been broad in nature. In this component the advanced graduate student will have the opportunity to take additional physics, chemistry, mathematics, sociology, psychology and coursework to develop a level of competence in one or two conceptual areas in his substantive teaching field. The impacts of industry and technology, a course required of all students in the program permits the student to look at how his teaching area has had an effect on man and society. The culminating activity is a field study which is six (6) semester credits of the eighteen (18) semester credits required in this component. The field study is concerned with structuring the body of knowledge related to one's substantive area of teaching; developing an instructional unit to develop a particular concept or sub-concept; and field test the instructional unit to validate its content and criterion measures to determine if the student is able to generalize about the concept or sub-concept.

The applied research component consists of coursework in computer science, research design and procedures, and statistics. A holder of an advanced degree should have an intimate knowledge of research design, measurement and statistics, and a broad background in the problems associated with industrial and vocational education.

The professional education component consists of courses in the foundational areas of education and curriculum and instruction. There is a growing body of knowledge and research dealing with education and the instructional process. It is imperative that the Education Specialist be able to implement current innovative educational practices and thought into the curriculum and the teaching process.

The three components are shown below as they appear in the curriculum requirements for the degree. The 500-level numbered courses are open to all graduate students. The 600-numbered courses are for the Education Specialist degree program students only.

PROGRAM PLAN

To qualify for the degree of Education Specialist — Industrial and Vocational Education, requires that the student earn not less than 36 semester credits beyond the master's degree which will be distributed as follows:

		Sem. Hrs.	Sem. Hrs.
Industry and Technology			16-20
Required:			
100-510	Bases for Studying the Impacts of Industry and Technology	2	
100-690	Field Study	6	
Selectives		8-12	
Applied Research			6-10
Required:			
354-541	Digital Computer Programming	2	
421-616	Instrumentation for Research	3	
Selectives		0-4	
Professional Education			6-10
Required:			
479-601	Psychology of Development	3	
421-611	Structuring Knowledge	2	
Selectives		1-5	

I. INDUSTRY AND TECHNOLOGY

A. Sciences Basic to Industry and Technology

1. Chemistry

311-555	Chemistry of Industry	4
311-556	Chemistry of Industry	2
311-565	Industrial Organic Chemistry	3

2. Economics

320-510	Contemporary American Economic Problems	3
320-515	Contemporary International Economic Problems	3
320-520	Labor and Industrial Relations	2

3. Mathematics

355-5xx	Essentials of Mathematical Logic (Course in process of development)	4

4. Physics

372-505	Classical Physics in Industry	3
372-506	Modern Physics in Industry	3

5. Sociology

387-425	Sociology of Leisure	3
387-440	Sociology of Work	3
387-460	Juvenile Delinquency	3
387-475	Sociology of Minority Groups	3
387-490	Sociological Theory	3

6. Speech
   - 391-405 Speech Skills for Business and Industry 2
   - 391-406 Speech Skills for Educators 2
7. Psychology
   - 479-601 Psychology of Development 3

B. Science of Industry and Technology
1. Interdisciplinary
   - 100-520 Industrial Materials 4
   - 100-540 Introduction to Problems of Industry and Technology 1
   - 100-690 Field Study in Industry and Technology 6
2. American Industry
   - 102-402 Physical Facilities 2
   - 102-417 Finance and Procurement in Industry 2
   - 102-423 Processess II 1
   - 102-438 Energy in Industry 2
3. Electronics
   - 124-412 Basic Instrumentation and Control 2
   - 124-414 Electronic Communication 2
   - 124-424 Network Analysis 3
   - 124-440 Information Theory 3
   - 124-444 Communication Systems I 3
   - 124-446 Communication Systems II 3
   - 124-454 Eletronic Control Systems 3
   - 124-458 Feedback Control Systems 3
   - 124-462 Pulse and Switching Circuits 3
   - 124-464 Computer Systems 3
   - 124-476 Electronic Circuit Design 3
   - 124-544 Problems in Industry and Technology — Electronics 2-6
4. Graphic Arts
   - 137-449 Printing Economics 2
   - 137-450 Color Separation 2
   - 137-459 Relief and Screen Process 2
   - 137-550 Operational Materials for Graphic Arts 2
   - 137-543 Problems in Industry and Technology — Graphic Arts 2-6
5. Industrial Graphics
   - 148-401 Mechanical Design Problems 3
   - 148-434 Product Development 2
   - 148-451 Architectural Design III 2
   - 148-463 Industrial Design Workshop 2
   - 148-475 Graphic Analysis & Computation 2
   - 148-476 Computer Assisted Design Problems 2
   - 148-501 Theoretical Foundations for Technical Drawing 3
   - 148-525 Recent Developments in Industrial Graphics 3
   - 148-541 Problems in Industry and Technology — Industrial Graphics 2
   - 148-546 Seminar in Industrial Graphics 2

6. Metals
   - 157-418 Metallurgy 2
   - 157-423 Plastics Mold Making 2
   - 157-457 Welding II 2
   - 157-461 Tool and Die Making 2
   - 157-462 Maintenance of Metalworking Equipment 2
   - 157-545 Problems in Industry and Technology — Metals 2
   - 157-474 Numerical Control II, Programming for Continuous Path Controls 3
7. Power Technology
   - 176-426 Fluid Power Systems Design 3
   - 176-445 Auto Shop Maintenance and Management 3
   - 176-456 Transmission and Drive Trains 2
   - 176-466 Auto Engine Rebuilding 2
   - 176-468 Tune Up and Diagnosis 2
   - 176-502 Recent Developments in Power Technology 2
   - 176-547 Problems in Industry and Technology — Power and Transportation 2
8. Wood Technics and Plastics
   - 196-440 Plastics II 2
   - 196-464 Tool and Machine Conditioning 2
   - 196-507 Wood Properties I: Structure and Characteristics 3
   - 196-540 Plastics Materials and Processes 3
   - 196-546 Problems in Industry and Technology — Wood Technics 2
   - 196-548 Problems in Industry and Technology — Plastics 2

C. Impacts of Industry and Technology
   - 100-510 Bases for Studying the Impacts of Industry and Technology 2

II. APPLIED RESEARCH

A. Research Design and Procedures
   - 421-541 Basic Research Design 3
   - 421-616 Instrumentation for Research 3

B. Computer Science
   - 354-541 Digital Computer Programming 2

C. Statistics
   - 421-561 Educational Statistics 2
   - 421-562 Inferential Statistics 3
   - 421-563 Sampling Techniques 3

III. PROFESSIONAL EDUCATION

A. Foundations
1. Education
   - 413-405 History of Education 2
   - 421-500 Philosophy of Modern Education 2

421-505 Social Thought of American Educators 2

2. Psychology
   - 479-555 Advanced Educational Psychology 2
   - 479-601 Psychology of Development 3

B. Curriculum and Instruction
1. Audio-Visual
   - 407-532 Planning Media Facilities 2
   - 407-547 Communication Media Design 2
   - 407-551 Programmed Instruction 2
2. Counseling and Guidance
   - 413-534 The Technical-Vocational Education Student 2
3. Education
   - 421-514 Teaching Strategies 4
   - 421-550 Curriculum Theory and Practice 2
   - 421-611 Structuring Knowledge 2
4. Industrial Teacher Education
   - 449-508 Issues in Industrial Education 2
   - 449-510 Curricular Innovations Affecting Industrial Education 2
   - 449-538 Course Construction in Industrial Education 2
5. Vocational Education
   - 469-474 Adult Education 2
   - 469-510 Coordination 2
   - 469-515 Technical Education Programs 2
   - 469-573 Problems in Coordination 2

C. Supervision and Administration
1. Industrial Management
   - 150-445 Introduction to Operations Research 3
   - 150-513 Educational Systems Analysis 3
2. Education
   - 421-479 Public Relations 2
   - 421-502 Principles of Supervision 2
   - 421-526 Administration 2
   - 421-527 Supervision of Student Teachers 2
3. Vocational Education
   - 469-592 Administration of Vocational, Technical and Adult Education 2

PROFESSIONAL EDUCATION EMPHASIS

This emphasis of the Education Specialist degree in Industrial and Vocational Education has been designed to further the individual who has committed himself to additional depth in his preparation as a professional educator in the areas of curriculum and instruction and the supervision of instruction.

Content for the advanced degree program will be drawn from three bodies of knowledge: (a) professional education, (b) applied research, and (c) industry and technology. Selection of these three components is based on the assumption that the holder of an advanced degree should be a practicing educator, capable of solving problems through applied research techniques, and a scholar in his discipline.

CURRICULUM

The curriculum consists of three groups of courses and/or experiences as follows: Professional Education (Curriculum and Instruction and the Supervision of Instruction), Applied Research, and Industry and Technology.

The professional education component has two sub-components: curriculum and instruction and the supervision of instruction.

Curriculum and instruction involves the advanced graduate student in curriculum engineering, instructional systems, instructional strategies, structuring knowledge, principles of learning, guidance of learning activities, identification and determination of instructional content, and computer assisted instruction as related to Industrial and Vocational Education.

Supervision of instruction involves policy developments, program planning budget systems, cost analysis, cost effectiveness, program evaluation review techniques, accountability in education, decision making models, evaluation systems, improvement of instruction, financial aspects, coordination, leadership procedures, economics in education, management information systems, and management techniques as related to Industrial and Vocational Education. The culminating activity is a field study which is six (6) semester credits of the total (16-20 credits) in this component. The field study provides one the opportunity to put into practice some aspect of the program that will benefit him and the institutional setting where he is employed or aspires to be employed.

The applied research component consists of coursework in management information systems, instrumentation for research and manpower research and planning. A holder of an advanced degree should have knowledge of research design, measurement and statistics and an understanding of problems associated with industrial and vocational education.

The industry and technology component consists of courses in the sciences basic to industry and technology (math, computer science, sociology, psychology, communication, and economics) and the impacts of industry and technology on man and society.

The three components are shown below with a listing of the required courses for the program. The 500-level numbered courses are open to all graduate students. The 600-numbered courses are for the Education Specialist degree program students only.

PROGRAM PLAN

To qualify for the degree of Education Specialist, requires that the student earn not less than 36 semester credits beyond the Master's degree which will be distributed as follows:

	Sem. Hrs.	Sem. Hrs.
Professional Education		16-20
Required:		
400-690 Field Study	6	
421-611 Structuring Knowledge	2	
Selectives	8-12	

Applied Research 6-10
Required:
421-616 Instrumentation for Research 3
Selectives 3-7
Industry and Technology 6-10
Required:
100-510 Bases for Studying the Impacts of Industry and Technology 2
421-601 Psychology of Development 3
Selectives 1-5

I. PROFESSIONAL EDUCATION

A. Foundations
421-405 History of Education 2
421-500 Philosophy of Modern Education 2
421-505 Social Thought of American Educators 2
479-555 Advanced Educational Psychology 3

B. Curriculum and Instruction
1. Audio-Visual
407-532 Planning Media Facilities 2
407-547 Communication Media Design 2
407-551 Programmed Instruction 2

2. Guidance
413-491 Theories of Career Development 2
413-534 The Technical-Vocational Education Student 2
413-550 Appraising the Individual 2
413-552 Group Guidance Procedures 2
413-690 Sensitivity Training 2

3. Education
400-690 Field Study 6
421-514 Teaching Strategies 4
421-550 Curriculum Theory and Practice 2
421-552 Group Dynamics 2
421-5xx Instructional Systems for Training Programs (Course in process of development) 2
421-599 Independent Study 2
421-611 Structuring Knowledge 2

4. Industrial Teacher Education
449-508 Issues in Industrial Education 2
449-510 Curricular Innovations Affecting Industrial Education 2
449-538 Course Construction in Industrial Education 2

5. Vocational Education
469-460 Cooperative Occupational Education Programs 2
469-474 Adult Education 2
469-510 Coordination 2
469-515 Technical Education Programs 2
469-558 Seminar in Vocational Education 2
469-573 Problems in Coordination 2

6. Vocational Rehabilitation
459-517 Occupational Analysis and Information 2
459-557 Man and Work 2

C. Supervision and Administration
1. Education
150-513 Introduction to Educational Systems Analysis 3
400-690 Field Study 6
421-479 Public Relations 2
421-502 Principles of Supervision 2
421-526 Administration 2
421-527 Supervision of Student Teachers 2
421-549 Organization and Administration of Student Personnel Services 2
320-570 Economics in Education 4

2. Vocational Education
469-592 Administration of Vocational-Technical and Adult Education 2
469-584 Internship — Local Vocational Education Coordinator (LVEC) 4-8

II. APPLIED RESEARCH

A. Research Design and Procedures
421-533 Survey Procedures (Manpower Planning Analysis) 2
421-541 Basic Research Design 3
421-616 Instrumentation for Research 3

B. Computer Science
400-6xx Management Information Systems (course in process of development 4

C. Statistics
421-561 Educational Statistics 2
421-562 Inferential Statistics 3
421-563 Sampling Techniques 3

III. INDUSTRY AND TECHNOLOGY

A. Economics
320-510 Contemporary American Economic Problems 3
320-520 Labor and Industrial Relations 2

B. Sociology
387-425 Sociology of Leisure 3
387-440 Sociology of Work 3
387-460 Juvenile Delinquency 3
387-475 Sociology of Minority Group 3
387-490 Sociological Theory 3

C. Speech
391-405 Speech Skill for Business and Industry 2
391-406 Speech Skills for Education 2

D. Psychology
479-601 Psychology of Development 3

COURSE DESCRIPTIONS

Applied Science and Technology

Home Economics

Liberal Studies

Education

COURSE NUMBERING SYSTEM

Course numbers are designed, in part, to indicate the school and the department within the school that are offering the course. An example: 176-547 Problems in Industry and Technology is offered by the School of Applied Science and Technology (1), by the school's Power Technology Department (76) and is a graduate only (5) fifth year course. The fifth and sixth numbers (47) are assigned by the Registrar's Office for office use. School and department numbers are:

APPLIED SCIENCE AND TECHNOLOGY (1)

100 Interdepartmental
102 American Industry
107 Audio Visual
124 Electronics
137 Graphic Arts
148 Industrial Graphics
150 Industrial Technology
157 Metals
176 Power Technology
182 Safety
196 Wood Technics and Plastics

HOME ECONOMICS (2)

200 Interdepartmental
212 Child Development and and Family Life
214 Clothing and Textiles
229 Food Science and Nutrition
244 Home Management
245 Hotel and Restaurant Management

LIBERAL STUDIES (3)

303 Anthropology
304 Art
308 Biology
309 Business Administration
311 Chemistry
320 Economics
326 English — Journalism
328 Foreign Languages
336 Geography
338 History
354 Applied Mathematics
355 Mathematics
360 Music
365 Philosophy
366 Physical Education
367 Physical Education — Men
368 Physical Education — Women
372 Physics
375 Political Science
387 Sociology
391 Speech

EDUCATION (4)

401 American Industry Education
405 Art Education
407 Audio-Visual Education
413 Counseling and Personnel Services
416 Distributive Education
421 Education
442 Home Economics Education
449 Industrial Teacher Education
459 Vocational Rehabilitation
469 Vocational Education
477 Early Childhood Education
479 Psychology

COURSE SELECTION

Graduate coursework is not exclusively designated except for the 500 and 600 series courses. Certain selected courses designated in the 300 or 400 series are available for graduate credit in specific cases where appropriate to a given program. Usually in these mixed (graduate and undergraduate) classes there is something extra demanded of the graduate student. At least one-half of the coursework taken to earn a graduate degree must be in the 500 and 600 series courses. Coursework taken as an undergraduate cannot be transferred to serve as graduate credit.

The courses listed in this part are only those which are specifically listed in the several programs detailed in Degree Programs and Requirements. Inquiry should be made of the major adviser as to other courses which may have been or may be qualified as graduate coursework; such courses are listed in the current undergraduate bulletin.

APPLIED SCIENCE AND TECHNOLOGY

100-510 Bases for Studying the Impacts of Industry and Technology. 2 Cr. A contemporary, historical and futuristic look at some of the economic, sociological, psychological and political implications of industry and technology. Students will identify and investigate several impacts of industry and/or technology to show depth of understanding and relationships between them.

100-520 Industrial Materials. 4 Cr. A broad technical study of common industrial materials normally dealt with and used for a multitude of industrial and domestic applications. The study of materials will begin with a review of the structure of matter, continuing then to consider the material families for common properties and significantly different characteristics.

100-540 Introduction to Problems in Industry and Technology. 1 Cr. Study of selection criteria for advanced technical problems in industry and technology, development of techniques appropriate to attacking these problems, identification of industries and organizations relating to these problems and preparation of a detailed proposal to explore a particular problem. Students should enroll for this during their first graduate enrollment and should plan to take the appropriate Problems in Industry and Technology course during their next enrollment. May not be repeated for credit.

100-542 Problems in Industry and Technology — General Shop. 2-6 Cr. Substantive study and activity for specialists in the General Shop field to include library work, field observation, laboratory work planned by the student and approved and supervised by a faculty consultant. Preparation of a technical report. May be repeated for a maximum total of 6 credits. Prerequisite: 100-540.

100-690 Field Study in Industry and Technology. 6 Cr. A study which provides the graduate student with the opportunity to: (1) explore in depth the body of knowledge associated with his substantive teaching field in industry and technology, (2) provide an educational experience for implementing this knowledge in the classroom situation, and (3) devise methods to determine if this methodology has brought about desired behavioral changes.

102-500 Curriculum for American Industry. 4 Cr. Special topics on current developments in the field. Each seminar devoted to a specific development to be indicated with a subtitle and description.

102-501 Foundations of American Industry. 4 Cr. A study of the substantive conceptual areas of American Industry: Communication, Transportation, Finance, Property, Research, Procurement, Relationships, Marketing, Management, Production, Materials, Processes, and Energy. Prerequisite: 102-500.

102-502 Interrelationships of American Industry Concepts. 3 Cr. Interrelationships of American Industry Concepts: Communication, Transportation, Finance, Property, Research, Procurement, Relationships, Marketing, Management, Production, Materials, Processes, and Energy. Prerequisite: 102-501.

107-404 Elementary Photography. 2 Cr. Fundamentals of photography including basic theory and technical information, composition, film processing, contact printing, enlarging, and mounting. Each student required to provide camera and film.

107-405 Advanced Photography. 2 Cr. Advanced monochromatic photography including camera techniques, composition, lighting, selection of photographic materials, film development, contact printing, enlarging, toning and application. Prerequisite: 107-404.

107-445 Color Photography. 2 Cr. Fundamentals of color photography including color theory, composition, multilayer films, color film processing, color printing, and application. Prerequisite: 107-404.

107-540 Problems in Industry and Technology — Photography. 2-6 Cr. Substantive study and activity for specialists in the photography field to include library work, field observation, laboratory work planned by the student and approved and supervised by a faculty consultant. Preparation of a technical report. May be repeated for a maximum total of 6 credits. Prerequisite: 100-540.

124-412 Basic Instrumentation and Control. 2 Cr. Principles and practices of measurement and industrial control. Open and closed loop control system of control are studied. Transducers, analog to digital converters, and automatic read out systems are presented. Prerequisite: 124-310.

124-414 Electronic Communication. 2 Cr. A study of electronic communication systems to the depth where the student will understand the function, principle of operation, application, and limitations of each system. Prerequisite: 124-310.

124-424 Network Analysis. 3 Cr. A theoretical approach of elec-

trical network analysis. Network equations, LaPlace transformation, frequency domain analysis, applied differential equations, steady state and transient analysis. No laboratory work is required. This course is required for students to pursue more advanced studies in electronics. Prerequisite: 124-228.

124-440 Information Theory. 3 Cr. Electronic communication theories, information transmission, network responses to signals, modulation systems, demodulation systems, amplitude modulation, double sideband, single sideband, narrow band frequency modulation, wide band frequency modulation systems, periodic sampling pulse modulation and demodulation, and noise analysis. Laboratory work is required. Prerequisites: 124-424 and 124-326.

124-444 Communication Systems I. 3 Cr. An analytical study of communication transmission and receiving systems, the circuits and design techniques of systems, signal transmission systems, signal receiving systems, and applied techniques. Laboratory work is required. Prerequisite: 124-440.

124-446 Communication Systems II. 3 Cr. An analytical study of antenna systems, electromagnetic field theory, low frequency antenna, high frequency antenna theory and design, radio frequency transmission lines and graphical synthesis of impedance matching networks. Laboratory work is required. Prerequisite: 124-444.

124-454 Electronic Control Systems. 3 Cr. General electronic control systems, sensing devices, control devices, sequence control, basic feedback control principles, analog computation and control, numerical controls. Laboratory work is required. Prerequisites: 124-352, 124-424.

124-458 Feedback Control Systems. 3 Cr. Models and equations of linear system, feedback control components, general theory, response of feedback systems, the Nyquist criterion, Bode plot analysis, polar plots, frequency response, root-loci techniques, nonlinear system analysis. Laboratory work is required. Prerequisite: 124-454.

124-462 Pulse and Switching Circuits. 3 Cr. Linear wave shaping, pulse transformers and delay lines, steady state switching, clamping and clipping circuits, switching circuits, logic circuits, multivibrators, time base generators, sampling gates. Laboratory work is required. Prerequisites: 124-326, 124-424.

124-464 Computer Systems. 3 Cr. An analytical study of electronic circuit design, philosophy of circuit design, general design procedures, C.C. and low frequency design, high frequency design, digital circuit design, switching circuit design, power supply, analog computer design, circuit evaluation techniques. Laboratory work is required. Prerequisite: 124-462.

124-476 Electronic Circuit Design. 3 Cr. An analytical study of electronic circuit design, the philosophy of circuit design, general design producers, DC and low frequency design, high frequency design, digital circuit design, switching circuit design, power supply, analog computer circuit design, and the circuit evaluation techniques. Some laboratory work is required. Prerequisites: 124-462 and 124-424.

124-544 Problems in Industry and Technology — Electronics. 2-6 Cr. Substantive study and activity for specialists in the electronics field to include library work, field observation, laboratory work planned by the student and approved and supervised by a faculty consultant. Preparation of a technical report. May be repeated for a maximum total of 6 credits. Prerequisite: 100-540.

137-449 Printing Economics. 2 Cr. Estimating production costs, specification of equipment, materials inventory and control, and the study of systems which expedite graphic reproductions.

137-450 Color Separation. 2 Cr. Study of the nature of color and light. Color separation from reflected and transmission copy. Theory of filters, densipometry, and their relation to color separation. Direct and indirect photographic color separation methods. Prerequisite: 137-376.

137-459 Relief and Screen Processes. 2 Cr. Study in depth of letterpress and screen process image transfer machines and associated procedures including printability of varied interceptors. Prerequisite: 137-236.

137-543 Problems in Industry and Technology—Graphic Arts. 2-6 Cr. Substantive study and activity for specialists in the graphic arts field to include library work, field observation, laboratory work planned by the student and approved and supervised by a faculty consultant. Preparation of a technical report. May be repeated for a maximum total of 6 credits. Prerequisite: 100-540.

137-550 Operational Materials for Graphic Arts. 2 Cr. A penetrating study of operational materials for the major areas of graphic arts with reference to the economics of selection.

148-401 Mechanical Design Problems. 3 Cr. The study of the scientific methods of problem solving, applied mechanics, materials behavior, and manufacturing methods, correctly proportional stationary and moving parts, and the generation, transformation, or consumption of mechanical energy in the design of a machine. Prerequisite: 148-301.

148-434 Product Development. 2 Cr. Independent research directed to the solution of a student selected design problem requiring application of the sciences, industrial graphics, identification of manufacturing methods, marketing and cost analysis, and model or prototype construction when appropriate. Prerequisite: 148-222 or 148-233.

148-463 Industrial Design Workshop. 2 Cr. Product design from the inception of the idea to marketing the product. Procedure and techniques will be illustrated — some opportunity for laboratory work.

148-475 Graphic Analysis and Computation. 2 Cr. The study of fundamental graphical concepts, abstract graphic principles, formulas, and equations, vector geometry, and graphical concepts as they apply to modern engineering technology. Prerequisite: 148-250.

148-476 Computer Assisted Design Problems. 2 Cr. An introduction to the relationship of the computer to drafting and plotted

design, design automation, introduction to mechanical design problem analysis for computers, mathematical and simulation models for use in the solution of mechanical design problems. Prerequisite: 148-250.

148-501 Theoretical Foundations for Technical Drawing. 3 Cr. A study of various concepts for accurately representing three-dimensional spatial relations on a two-dimensional surface.

148-525 Recent Developments in Industrial Graphics. 3 Cr. The implementation of teaching currently accepted drafting theories and concepts as practiced by modern industry. New developments in materials and hardware and their utilization within the curriculum.

148-541 Problems in Industry and Technology — Industrial Graphics. 2-6 Cr. Substantive study and activity for specialists in the Industrial Graphics field to include library work, field observation, laboratory work planned by the student and approved and supervised by a faculty consultant. Preparation of a technical report. May be repeated for a maximum total of 6 credits. Prerequisite: 100-540.

148-546 Seminar in Industrial Graphics. 2 Cr. Review of commercial practices in industrial graphics, including: Drafting Departments, Design, Standards, Documentation, Dimensioning, Symbology, Equipment, Media and Automated Processes.

150-215 Packaging Fundamentals. 2 Cr. Introduction to the packaging industry. How it is affected by marketing, legal requirements and industrial standards. The functions and responsibilities of the profession. Prerequisite: 150-290.

150-410 Production Control. 2 Cr. Introduction to industrial plant operation; production planning and control. Forecasting, inventory control, production requirements, routing, scheduling, dispatching, and follow-up. Prerequisite: 150-300, 354-130.

150-442 Statistical Quality Control. 3 Cr. Application of statistics and probability theory in quality control. Emphasis on statistical theory underlying Schewart Control Charts, acceptance sampling plans, and introduction to design of experiment and analysis of variances. Prerequisite: 150-400.

150-445 Introduction to Operations Research. 3 Cr. Business and industrial application of operations research techniques using linear programming, decision models, and Monte Carlo methods. Problem applications in allocation, sequencing, waiting lines, and competitive strategies. Prerequisite: 150-300, 354-130, 355-167, or 355-153.

150-450 Industrial Supervision. 3 Cr. An overview of the supervisor's role in accomplishing organizational objectives through the management of human resources. Concepts of organizational and individual behavior serve as a foundation for the development of such supervisory skills as communication, motivation, initiating change, discipline, delegation, and handling grievances. Prerequisite: 150-300.

150-460 Industrial Management. 2 Cr. Management problems requiring use of prior coursework; emphasis on the human element. Use of role playing, conferences, outside speakers, and written reports related to actual and simulated case problems and industrial games. Prerequisites: 150-290.

150-470 Inventory Management. 3 Cr. A course covering the principles and techniques of ordering, storing, issuing and control of inventory throughout the manufacturing process. Special attention will be focused on the principles and applications of the Economics Order Quantity, the reorder point, safety stock, material movement, warehousing and distribution of the finished product. Prerequisites: 150-300 and 150-424.

150-510 Problems in Industry and Technology — Industrial Technology. 2-6 Cr. Substantive study and activity for specialists in the Industrial Technology field to include library work, field observation, laboratory work planned by the student and approved and supervised by a faculty consultant. Preparation of a technical report. May be repeated for a maximum total of 6 credits. Prerequisite: 100-540.

150-512 Systems Analysis and Design. 3 Cr. A survey of design approaches to industrial research. Application of appropriate research tools to analyze and design jobs, organizations, operating systems and product/market studies.

150-513 Introduction to Educational Systems Analysis. 3 Cr. Application of quantitative methodology to the solution of educational problems.

150-514 Introduction to Decision Theory. 3 Cr. Application of quantitative methodology to the solution of industrial problems.

150-520 Seminar in Industrial Operation. 3 Cr. Discussion of current, theory and practice of operation of engineering, marketing, manufacturing, financial administration and industrial relations aspects of industry. These integrated systems will be analyzed based upon the management of objectives concept.

150-550 Tutorial in Industrial Operations. 2 Cr. This course is designed to improve the student's competencies in all aspects of Industrial Technology. A major professor will be identified who will serve as a tutor in guiding the student's self-development program. There will be a culminating matriculation to candidacy examination to assure minimum proficiency standards.

150-590 Synergistic Experience: Advanced Manufacturing Systems. 3 Cr. This course is designed as a capstone experience to integrate and synthesize previous learnings within the context of an industrial environment. The total integrated systems approach will be applied to an industrial project. This may be either research in a simulated multi-factor industrial situation or an internship assignment. Prerequisites: 150-512, 150-514, 150-520 and 150-550.

157-418 Metallurgy. 3 Cr. Properties of crystalline solids, production of iron and steel, the carbon-iron equilibrium diagram, principles of heat treatment, properties of ferrour alloys. Production, properties, and theory of the most important non-ferrous metals and alloys. Prerequisite: 311-115.

157-423 Plastics Mold Making. 2 Cr. The student is required to design a metal mold for a plastic item and progress through the construction stages to the point where the mold will produce finished work pieces. A problem solving course in a specialized technical area.

157-457 Welding II. 2 Cr. Advanced work in arc and oxy-acetylene welding techniques; vertical, horizontal, overhead positions; destructive and nondestructive testing; MIG and TIG welding processes; oxy-acetylene machine and air carbon arc cutting. Prerequisite: 157-455.

157-461 Tool and Die Making. 2 Cr. Operations and technical information units for selected examples of single station cutting dies; drawing, expanding, non-cutting, assembling, progressive, and finishing dies. Layout, fabrication methods and operations involved are planned by the student.

157-462 Maintenance of Metal Working Equipment. 2 Cr. Repair and preventive maintenance of machine tool equipment. Emphasis on use of universal tool and cutter grinder. Alignment, fitting, and adjustment of precision machine tools. Prerequisite: 157-235.

157-464 Numerical Control in Manufacturing. 2 Cr. An investigation of numerical control of machine tools, justification of numerical control, types of control units and systems, feedback systems, manuscript writing and manual programming, tape punching and machine setup, fixture design and tool setting. Prerequisite: A working knowledge of the basic machining processes is recommended.

157-474 Numerical Control II, Programming for Continuous Path Controls. 3 Cr. Application of the computer for generating programs to machine curved, nonsymmetrical surfaces. Involves mathematical concept of N/C. Interpolation of surfaces between points by straight line or logarithmic methods, writing computer programs and proving problems. Field trips to industries using numerical control equipment. Prerequisite: 157-464.

157-477 Metal Production and Processes. 2 Cr. Advanced study in manufacturing processes and the production of metals. Student opportunity to study areas in which he is deficient. Prerequisite: 157-102.

157-545 Problems in Industry and Technology — Metals. 2-6 Cr. Substantive study and activity for specialists in the Metals field to include library work, field observation, laboratory work planned by the student and approved and supervised by a faculty consultant. Preparation of a technical report. May be repeated for a maximum total of 6 credits. Prerequisite: 100-540.

176-426 Fluid Power Systems Design. 3 Cr. Introduction to fluid power systems design through problem solving in areas of load analysis, circuit control, and component selection. Prerequisites: 176-307, 176-320 and 176-328.

176-445 Auto Shop Maintenance and Management. 3 Cr. Maintenance and management of equipment and personnel peculiar to the auto shop.

176-456 Automotive Transmissions and Drive Lines. 2 Cr. Power transmission through gears, clutches and drives common to the automobiles. Fluid couplings, gear sets, differentials, transmissions and drive lines. Prerequisite: 176-334.

176-466 Auto Engine Rebuilding. 2 Cr. Service procedures and practices for overhauling four stroke cycle gasoline engines including cylinders, pistons, rings, valve systems, camshafts, and crankshafts. Prerequisite: 176-238.

176-468 Auto Diagnosis & Tune Up. 2 Cr. Practicum in automotive tune-up and diagnostic service procedures; service operations with all types of modern automotive test equipment. Prerequisites: 176-341, 176-342.

176-547 Problems in Industry and Technology — Power Technology. 2-6 Cr. Substantive study and activity for specialists in the Power Technology field to include library work, field observation, laboratory work planned by the student and approved and supervised by a faculty consultant. Preparation of a technical report. May be repeated for a maximum total of 6 credits. Prerequisite: 100-540.

182-454 Industrial Safety. 3 Cr. An overview of occupational accident prevention programs. Emphasis on techniques of measurement, cost of accidents, locating and identifying accident sources, psychology of occupational safety and problems of selecting corrective action.

182-464 Programming Industrial Safety. 3 Cr. In-depth study of current administrative, organizational, and supervisory practices which are specifically and uniquely related to managing the operational industrial or occupational accident prevention program.

196-440 Plastics II. 2 Cr. Technical information relating to plastic materials and to tooling design for plastics. Product development with emphasis on experimental design in tooling and quality control. Prerequisite: 196-203.

196-464 Tool and Machine Conditioning. 2 Cr. Technical information on woodworking equipment, cutting theory, safety, and shop organization. Maintenance of woodworking machines, saw fitting, and general hand tool fitting. Prerequisite: 196-103.

196-507 Wood Properties I: Structure and Characteristics. 3 Cr. A study of the structure, characteristics and physical properties of wood and wood fiber as industrial materials. Testing of physical properties: static bending, impact, compression, shear, tension and hardness; moisture content, specific gravity; dimensional change and micro-macro photography.

196-540 Plastic Materials and Processes. 3 Cr. Recent developments in materials, machinery, processing and markets in the plastics industry.

196-546 Problems in Industry and Technology — Wood Technics. 2-6 Cr. Substantive study and activity for specialists in the Wood Technics field to include library work, field observation, laboratory work planned by the student and approved and supervised by a faculty consultant. Preparation of a technical report. May be repeated for a maximum total of 6 credits. Prerequisite: 100-540.

196-548 Problems in Industry and Technology — Plastics. 2-6 Cr. Substantive study and activity for specialists in the Plastics field to include library work, field observation, laboratory work planned by the student and approved and supervised by a faculty consultant. Preparation of a technical report. May be repeated for a maximum total of 6 credits. Prerequisite: 100-540.

HOME ECONOMICS

212-437 Seminar in Child Development. 2 Cr. Exploration in depth of special problems and aspects in the child development field with preference given to student's interests.

212-481 Dynamics of Marital Interaction — Problems in Home Economics. 2 Cr. Patterns of husband-wife power distribution, task differentiation, decision making, communication, role adaptation, and marital satisfaction over the family life cycle. A theoretical analysis of marital behavior within the family as a social system.

212-528 Family Life Issues. 2 Cr. A study of current issues and problems in marriage and the family. An investigation of research, literature and consideration of theoretical interpretations in today's world. An exploration of how familial experiences affect behavioral patterns and attitudes of children, adults and self.

212-542 Human Development. 2 Cr. Human development, theory, research, changing trends, problems and interpretations will be explored. Emphasis on application of scientific knowledge to practical relationships with children in the family, school, and community and implications of child development concepts toward understanding of self and others.

214-407 Textiles II. 2 Cr. Problems involving fiber identification, fabric performance, and fabric care. Chemical and microscopic testing procedures. Research methods for gathering and interpreting data. Individual problems. Prerequisite: 214-215.

214-411 Decorative Fabrics. 2 Cr. Study of historic and contemporary fabrics with analysis of designs and techniques of decorating fabrics. The contribution of decorative fabrics to the enrichment of human experience.

214-412 Draping. 3 Cr. Application of principles of costume design in the construction of garments by means of draping. Emphasis on creativity. Prerequisite: 214-218.

214-429 Textile Economics. 3 Cr. Textile market conditions affecting textile production, consumption and distribution. Patterns of textile consumption in business and industry. Prerequisites: 214-273 and 320-211.

214-435 Fashion Merchandising II. 3 Cr. Advanced principles for successful merchandising of fashion goods; merchandising procedures; analysis of customer wants; individual problem required. Prerequisite: 214-325.

214-439 Apparel Design. 2-4 Cr. Development of designs and construction of apparel using advanced techniques. Prerequisites: 214-313 or 214-412.

214-450 Tailoring. 3 Cr. Application of tailoring techniques in making suits and coats. Prerequisite: 214-218.

214-465 European Study Tour. 3-6 Cr. Tour of European Centers of art, clothing, and textiles. Study of the cultural patterns they reflect. Six week program includes lectures by consultants and seminars on the various phases of the fashion and fabric industries. (Summer).

214-471 History of Costume: Ancient to European 1900. 3 Cr. Development of costume throughout the ages. Fashion as it reflects the cultures of the past. Influence of the past on present-day costume.

214-475 History of American Costume. 2 Cr. Costume as it developed in the United States from Colonial Period to present day. Aspects of costume reflecting the cultural development. Influence of foreign countries upon costume culture.

214-479 Recent Developments in Clothing and Textiles. 2 Cr. Discussion, demonstration, and laboratory work. Individual experimental problems to determine choice, use, and care of modern fibers and fabrics. Newer construction techniques adapted for these fabrics. Prerequisite: 214-218.

214-480 Social-Psychological Aspects of Clothing. 3 Cr. Evaluation of research in consumer motivation, shopping behavior, and satisfactions with garments. Study is made of how society influences an individual's clothing choices and practices at various age levels.

214-482 Clothing and Textiles Problems. 2 Cr. Individual investigation in one specific field of interest within clothing and textiles. Opportunity to correlate clothing and textiles with related fields.

214-498 National Study Tour to Fashion Industry. 1 Cr. Membership limited to 20; Clothing and Textiles majors have priority. Five day visit in New York City or (alternate city). Program will involve study tours, discussions, and lectures by leading people in American fashion market.

214-505 Cothing Today's Family. 2 Cr. Factors affecting family expenditures for clothing. Clothing needs as affected by various psychological, social, and economic influences. Selection, purchasing, care and budgeting of clothing. The interrelationship of producers, distributors, and consumers.

214-514 Seminar in Clothing and Textiles. 2 Cr. Discussion and interpretation of recent developments in clothing and textiles. Individual reports.

214-517 Advanced Apparel Design. 3 Cr. Advanced study of creative apparel design and development of designs through draping or flat pattern methods. Provides opportunity for students to create apparel design ideas adaptable to various types of apparel in

relation to: type of fabric, style, and price level. Prerequisites: 214 313 and 214-412.

214-544 Workshop in Clothing and Textiles. 2 Cr. Opportunity for cooperative work in some aspect of clothing study.

214-551 Problems in Clothing and Textiles and Related Art. 2 Cr. Identification, selection and completion of a problem in Clothing and Textiles culminating in a Plan B paper. Prerequisite: 421-540.

214-570 Thesis — Clothing and Textiles. 6 Cr. Independent research under direction of investigation adviser. Selection of problems, development of outline, review of literature, compilation of bibliography, plan of method of attack, conduct of research, interpretation of finding, and preparation of the final paper according to thesis standards. Student may enroll for 2, 4, or 6 semester hours of credit in various terms with a final total of 6. Prerequisite: 421-540.

214-572 Advanced Textiles. 2 Cr. Investigations and new developments in the textile field. Opportunity for individual problems. Prerequisite: 214-215.

229-418 Diet Therapy. 3 Cr. Principles and methods for the use of diet as a therapeutic measure in certain pathological conditions. Prerequisite: 229-310.

229-433 Maternal and Child Nutrition. 3 Cr. Application of basic knowledge to maternal, infant, child, and adolescent nutrition. Prerequisites: 229-212, 212-234 and 308-214.

229-438 Experimental Foods. 3 Cr. Experimentation with selected food materials, techniques, and equipment. Opportunity for directed study in an individually chosen area. Prerequisite: 229-230.

229-442 Advanced Food Studies. 2 Cr. Based on the student's special interest in the field of food selection, preparation, and appraisal. Prerequisites: 229-230 and 229-308.

229-461 Social and Cultural Aspects of Food. 2 Cr. Social, economic, and cultural influence on man's food patterns.

229-501 Trends in Nutrition. 2 Cr. Practical application of recent developments in the field of nutrition. Prerequisite: 229-212.

229-502 Minerals and Vitamins. 3 Cr. Absorption and intermediary metabolism of minerals and vitamins. Prerequisite: 229-310.

229-508 Food Seminar. 2 Cr. Discussion and interpretation of recent developments in food preparation, food processing and food products. Choice of problems based on the needs and interests of the students.

229-511 Nutrition Seminar. 2 Cr. Discussion and interpretation of recent developments in fundamental and applied nutrition. Choice of problems based on needs and interests of students. Prerequisite: 229-308.

229-529 Proteins. 3 Cr. Digestion, absorption, and intermediary metabolism of protein. Perrequisite: 229-310.

229-530 Recent Developments in Food Science. 2 Cr. Consideration of current research which gives perspective in food science. Prerequisites: 311-208, 421-561 or 421-540.

229-536 Carbohydrates and Lipids. 3 Cr. Digestion, obsorption, and intermediary matabolism of carbohydrates and lipids. Prerequisite: 229-310.

229-546 Modern Methods in Food Preparation. 2-3 Cr. Individual development of subject matter, evaluation instruments, instructional materials and demonstration techniques. Prerequisites: 229-230 and 229-308.

229-547 Problems in Food Science and Nutrition. 2 Cr. Identification, selection and completion of a problem in Food Science and Nutrition, culminating in a Plan B paper. Prerequisite: 421-540.

229-556 Advanced Experimental Food. 3-4 Cr. Principles of research methods applied to directed investigations in food preparation. Prerequisite: 229-438.

229-570 Thesis — Food Science and Nutrition. 6 Cr. Independent research under direction of investigation adviser. Selection of problems, development of outline, review of literature, compilation of bibliography, plan of methods of attack, conduct of research, interpretation of findings, and preparation of final paper according to thesis standards. Student may enroll for 2, 4, or 6 semester hours of credit in various terms with a final total of 6. Prerequisite: 421-540.

244-481 House Evaluation. 2 Cr. Appreciation and understanding of the socio-economic factors and environmental conditions which influence effective utilization of family resources. Emphasis will be on costs, adaptability, safety, comfort, convenience, and maintenance based on family needs. Prerequisites: 244-304, 304-106, 320-201, and 387-309.

244-506 Trends in Home Management. 3 Cr. Philosophically oriented, problem-solving method will provide student with management concepts supplemented by experience with projects in student's individual settings.

244-517 Family Consumer Trends. 3 Cr. Consideration of contemporary consumer problems, practices and aids toward selection of qualities needed in certain common household commodities, types of protection including legislation, agencies, affecting consumer well-being and evaluation of consumer information. Field trip. Individual project.

244-528 Contemporary Issues in Family Finance. 3 Cr. Seminar on selected topics and current issues in finance related to concerns of individuals, families, and financial organizations in the community.

244-544 Ecology of Habitat. 2 Cr. A broad philosophical as well as physical perspective of human housing and which includes international aspects. A deep insight into family housing needs and the

achievement of learnings regarding these needs through laboratory experience. Value is placed upon the role of the home economist in the solution of world housing problems. Prerequisite: 6 hours of housing, equipment or equivalent.

LIBERAL STUDIES

303-420 Introduction to Cultural Anthropology. 3 Cr. Introduction to concepts and methods; variability of culture; outline of cultural elements; processes of cultural change.

304-423 Problems in Interior Design. 2 Cr. Advanced work in the design, selection and arrangement of furnishings for living and working quarters. May be repeated. Prerequisite: 304-334.

304-448 Housing. 3 Cr. Problems in dwelling construction with consideration given to location of the lot, family activities, materials, and cost. Prerequisite: 304-106.

308-406 Food Microbiology. 3 Cr. Fundamental methods of food preservation, their effectiveness, and the related spoilage of food products by microorganisms. Quality control techniques employed in determining the presence of specific groups of economically important microorganisms. Prerequisite: 308-306.

308-432 Heredity and Eugenics. 2 Cr. The essential principles of genetics and eugenics and their application to the human family. Physical, physiological and mental traits in man; positive and negative eugenics and euthenics. Prerequisite: 308-122.

311-411 Food Chemistry. 3 Cr. Organic and biochemistry of foods, with emphasis on the enzymatic and nonenzymatic changes associated with food preparation and storage, such as the Maillard-Browning reaction, denaturation of protein, changes in color, flavor, odor, texture and nutritive value. Techniques for the isolation and identification of the biochemical constituents of foods. Prerequisite: 311-208 or 311-209.

311-450 Instrumental Methods of Analysis. 3 Cr. Application of instrumental methods to chemical analysis, including electrochemical methods; ultraviolet, visible, and infrared spectrophotometry, radiochemical methods, and applications of common instrumental methods. Techniques for obtaining reliable results by instrumental means. Prerequisite: 311-115 or 311-135.

311-555 Chemistry of Industry I. 4 Cr. A study of the chemistry of the materials used in industry and of industrial production processes. Prerequisite: 311-115 or 311-135.

311-556 Chemistry of Industry II. 3 Cr. A study of the chemistry of the materials used in industry and of industrial production processes, including instrumentation and testing procedures, research techniques, scientific information and communication and industrial health and safety. Prerequisite: 311-555.

311-565 Industrial Organic Chemistry. 3 Cr. An introduction to the common industrial organic chemical processes used for the preparation of raw materials and their processing into usable forms suitable for product manufacturing. Prerequisite: 311-208.

320-510 Contemporary American Economic Problems. 3 Cr. Survey of domestic economic problems at advanced level with special emphasis on applications and effects on industry.

320-515 Contemporary International Economic Problems. 3 Cr. Survey of international economic problems at advanced level with special emphasis on application and effects on domestic industry.

320-520 Labor and Industrial Relations. 2 Cr. Human relations in industry from the viewpoint of labor, management, and the government.

326-415 Technical Writing for Home Economics. 3 Cr. An overview of specialized writing done by home economists in business. Experience in preparing reports, letters, and other appropriate materials. Prerequisite: 325-346.

326-416 Technical Writing in Industry. 3 Cr. A survey of the type of writing current in industry. Writing of business reports and other materials. Prerequisite: 326-344 or 326-347.

354-541 Digital Computer Programming. 2 Cr. Introduction to computer systems and their utilization. Emphasis on translating language with application to individual research projects, statistical or developmental. Not open to students who have completed 354-141 and 354-241.

372-505 Classical Physics in Industry. 3 Cr. Selected topics in classical physics are studied. Emphasis is placed on topics that have important industrial applications. Prerequisite: 372-221.

372-506 Modern Physics in Industry. 3 Cr. Selected topics in modern physics are studied. Emphasis is placed on topics that have important industrial applications. Prerequisite: 372-221.

387-315 Sociology of the Family. 3 Cr. The family as an institution. History; variations in other cultures; relationship to other institutions. Interactions of members in various stages of the life cycle. Prerequisite: 387-309.

387-350 Social Psychology. 3 Cr. The theory of social interaction and its applications with special emphasis on communication. Prerequisite: 387-309.

387-425 Sociology of Leisure. 3 Cr. An institutional approach to the effects of leisure on social structure; the values reflected in leisure; problems attending the increase in leisure resources. Prerequisite: 387-110.

387-440 Sociology of Work. 3 Cr. Human behavior in various types of employment and occupations; trends in the occupational structure of the United States. Prerequisite: 387-309.

387-460 Juvenile Delinquency. 3 Cr. Definitions and trends of de-

fiant behavior among youth; research findings; efforts toward prevention, control, and treatment. Prerequisite: 387-309.

387-475 Sociology of Minority Groups. 3 Cr. Social-psychological aspects of the interaction between majority and minority groups; trends of minorities in the United States. Prerequisite: 387-309.

387-490 Sociological Theory. 3 Cr. Contributions of major social theorists; chief components of contemporary general sociological theory. Prerequisite: 387-309.

391-405 Speech Skills for Business and Industry. 2 Cr. Training in technical speaking, projects emphasizing the application of speech skills and activities in business and industry. Prerequisite: 391-106.

391-406 Speech Skills for Educators. 2 Cr. Application of leadership techniques and speech skills in classroom and educational activities. Prerequisite: 391-106.

391-470 Television Programming and Performance. 3 Cr. Planning, writing and performing in instructional, public service, special feature, or dramatic television programs. Programs will be produced in cooperation with students in 107-493, Television Production Techniques. Prerequisite: 391-106.

EDUCATION

407-435 Film: History and Appreciation. 3 Cr. Traces the evolution of the motion picture film as a medium of mass communication and aesthetic expression; contributions of noted film producers are identified.

407-436 Fundamentals of Motion Picture Production. 3 Cr. Fundamentals of super 8mm and 16mm film production. Production planning, cost estimating, visual continuity, shooting, animation, editing, sound recording, titling, laboratory services, and other technical problems of production. Individual and group projects.

407-460 Audio-Visual Communication. 2 Cr. Methods of selecting and using audio-visual materials effectively in teaching. Experience in operating equipment, basic techniques of media preparation, practice in planning and presenting a lesson.

407-461 Preparation of Audio-Visual Materials. 2 Cr. The planning and production of opaque materials, charts, graphs, posters, transparencies, bulletin boards, displays, models, mock-ups, specimens, script writing, chalkboard aids, and recording techniques. Prerequisite: 407-460.

407-493 Television Production Techniques. 3 Cr. Production of television programs in cooperation with students in 391-470, Television Programming and Performance. Each student will gain experience as director, technical director, cameraman, floor manager, audio controlman, telecine operator, and lighting director. Includes related technical information.

407-494 Instructional Communications Systems. 2 Cr. Application of eletcronic communications systems used to solve educational problems. Emphasis on audio systems including microphones, tape decks, and duplicators, paging systems, language labs and intercommunication equipment; Multimedia systems including information retrieval, multiple response, and simulators; television systems and equipment. Prerequisite: 407-460.

407-522 Problems in Audio-Visual Communications. 2 Cr. Identification, selection, and completion of a problem in audio-visual communications, culminating in a Plan B paper. Prerequisite: 421-540.

407-530 Media Retrieval Systems. 2 Cr. A survey of various media classification, storage and retrieval models as applied to information centers and their operation. Compares traditional models with the logic of manual, mechanical, and electronic retrieval systems.

407-532 Planning Media Facilities. 2 Cr. Planning physical facilities for media production and distribution centers; large group multi-media auditoria; small group instructional areas; and mediated carrels. Consideration of technological and environmental factors. Emphasis on working relationships with architects. Prerequisite: 407-460.

407-547 Communications Media Design. 2 Cr. Identification of the communication problems through analysis of content, audience, and media. Selection, design and preparation of audio-visual materials. Prerequisite: 407-460.

407-551 Programmed Instruction. 2 Cr. Theory, principles, application, and evaluation of programmed instruction techniques. Survey of programmed instruction techniques. Survey of commercial programs, sources, and types of teaching machines. Practice in writing programmed instruction units.

407-559 Seminar in Educational Media Research. 2 Cr. Implications of significant educational media research and the implementation of research findings in teaching. Prerequisite: 407-460.

407-560 Educational Media Administration. 2 Cr. Seminar in administration of public school and college educational media programs. Group field projects supplement discussions of related literature. Prerequisite: 407-460.

407-570 Thesis — Audio-Visual Communications. 6 Cr. Independent research under the direction of investigation advisor. Selection of problems, development of outline, review of literature, compilation of bibliography, plan of method of attack, conduct of research, interpretation of findings, and preparation of the final paper according to thesis standards. Student may enroll for 2, 4 or 6 semester hours of credit in various terms with a final total of 6. Prerequisite: 421-540.

413-401 Introduction to Guidance and Counseling. 2 Cr. An overview of policies and practices of

organized guidance programs for schools and colleges. Emphasis is given to the philosophy and evaluation of guidance, understanding the individual, counseling, and group guidance as it affects the classroom teacher and personnel worker.

413-405 History of Education. 2 Cr. Elementary, secondary and higher education in the U. S. from the early colonial period to the present time.

413-429 Guidance in the Elementary School. 2 Cr. The nature and conditions of guidance in the elementary school. Curricular and non-curricular guidance techniques, referrals, and parent counseling. Recommended principles and practices in guidance applied to the elementary school child. (Quarter)

413-455 Human Relations in the Community. 2 Cr. Consideration of the social, psychological, medical, physical, spiritual and interpersonal aspects of growing into responsible adulthood. (Summer Session only).

413-475 Counseling Theory. 2 Cr. The examination of theoretical approaches to counseling, including psychoanalytic adaptations, behaviorism, trait-factor, client-centered and other approaches. Each approach is examined concerning the nature of man, the underlying personality theory, goals of counseling, the role of counselor, and illustrative practical applications. The major objective of the course is to develop a beginning personal theory of counseling. Prerequisite: 413-401.

413-490 Aptitude and Achievement Appraisal. 2 Cr. Selection, interpretation, and use of tests and inventories for teachers and counselors. Study of achievement, aptitude, interest and personality tests with experience in the interpretation of results. Prerequisite: 413-401, 413-429, or 212-264. (Quarter)

413-491 Theories of Career Development. 2 Cr. A study of the psychology of work including career development, the meaning of work, job satisfaction and factors in career choice. Prerequisite: 413-401.

413-505 Play Therapy. 2 Cr. A survey and study of play therapeutic techniques. Observation and supervised experiences on field agencies. Prerequisite: 479-513 and 479-555.

413-511 Introduction to Student Personnel Services. 2 Cr. Critical examination of the history, philosophy and status of student personnel services in American colleges and universities. Particular attention is focused on student activities, residence programs, college counseling and advising financial aids and records.

413-531 Problems in Counseling and Personnel Services. 2 Cr. Plan B investigations are the primary purpose of this course. Students who are ready to write their Plan B paper should register for this course and then confer with the counselor education major advisor to select staff member who will serve as an investigation advisor. Meetings with the advisor are by arrangement only. Prerequisite: 421-540.

413-534 Technical-Vocational Education Student. 2 Cr. Review of characteristics of vocational and technical students as it affects their social, physical, emotional and intellectual development in the transition from adolescence to young adulthood. Implications for guidance, counseling, and vocational education.

413-537 Curriculum and Methods in Group Guidance. 2 Cr. A course designed to provide the student with knowledge of and techniques in organizing, administering and teaching a formal guidance curriculum in the school system (k-12); investigation of ways to incorporate occupational, educational and personal-social information into the school curriculum; development of course outlines and curriculum; methods of working with students in personal, vocational and educational planning are investigated. Prerequisites: 413-491 and 413-535.

413-541 Individual Mental Testing. 2 Cr. Theory of mental measurement through use of individual assessment procedures. Using individual mental testing for guidance purposes. Introduction to administration of Stanford-Binet, the three Wechsler instruments (WWPS, WISC, and WAIS), and other usable procedures. This course does not qualify student for the administration of individual mental test.

413-543 Advanced Individual Mental Testing. 2 Cr. Diagnostic and remedial approaches to learning difficulties in educational settings. Prerequisite: 413-541.

413-545 Assessment of Personality (Projectives). 2 Cr. History, theory and methodological consideration and studies of projective instruments. Instruction in administration, scoring, and interpretation of some currently used devices leading to a knowledgeable understanding of the instruments.

413-547 Behavior Problems of Children. 2 Cr. Understanding the psychological, social and environmental factors which contribute to the developing child's behavior. Primary emphasis is on the cause and treatment of behavioral disorders in children three through twelve. Included: methods of observing, diagnosing, documenting and interpreting and underlying behavioral dynamics of problem children. Prerequisites: 479-513 and 479-555.

413-548 Diagnosis and Remediation of Learning Difficulties. 2 Cr. Diagnostic and remedial approaches to learning difficulties in educational settings. Prerequisite: 413-541.

413-549 Organization and Administration of Student Personnel Services. 2 Cr. The study of the philosophical background, the organization and administration of student personnel services in higher education settings. Visits to other campuses. Prerequisites: 413-546 and 413-550.

413-550 Appraising the Individual. 2 Cr. The case study approach to synthesis of test and non-test appraisal data. Prerequisites: 413-475, 413-490, 413-491, and 479-513.

413-552 Group Guidance Procedures. 2 Cr. A study of group approaches for providing guidance services to pupils. Designed to

help counselors and teacher-counselors understand how groups may be used as a setting for guidance and counseling. Prerequisites: 413-401 and 413-475.

413-554 Seminar in Counseling and Personnel Services. 2 Cr. A survey and study of play therapeutic techniques. Observation and supervised experiences in appropriate field agencies and institutions.

413-565 Organization and Administration of Guidance. 2 Cr. Duties of administrators, guidance directors, deans, teachers, parents, pupils and lay persons in guidance work. A study of types of organization methods of inititating programs and of in-service training. Prerequisite: 413-475.

413-570 Thesis — Counseling and Personnel Services. 6 Cr. Independent research under direction of investigation adviser. Selection of problems, development of outline, review of literature, compilation of bibliography, plan of method of attack, conduct of research, interpretation of findings, and preparation of the final paper according to thesis standards. Student may enroll for 2, 4, or 6 semester hours of credit in various terms with a final total of 6. Prerequisite: 421-540.

413-574 Supervised Internship in Student Personnel Service. 6 Cr. Counseling and guidance with a variety of clients in a variety of settings. Practical experience in several types of personnel services. Intensive study and seminar presentations of a single personnel service, its history, philosophy, programs, evaluation and future prospects. The services which may be studied include residence hall living, student activities, financial aids, counseling and advisement programs, admissions and records. Prerequisites: 421-481 and 413-511.

413-590 Supervised Counseling Practicum. 4 Cr. A minimum of 120 hours of closely supervised counseling experience through a series of interviews with selected counselees. Prerequisite: 413-550.

413-592 Advanced Counseling Practicum. 2 Cr. Clinical supervised counseling experiences in a variety of school institutional and agency settings. Designed to assist the student to more adequately understand and apply the dynamics of human behavior in the one-to-one counseling relationship. A minimum of 60 to 90 clock hours of experience is required. Prerequisite: 413-590.

413-595 Clinical Practice in Educational Diagnosis (I and II). 2 Cr. Develop understanding of the roles of the psychological clinician. Supervised clinical experience in diagnosis and/or counseling with individuals, principally in educational settings. May be repeated as 413-595 in the School Psychology I Curriculum. Prerequisites. 413-543 and 413-548.

413-596 Internship in School Psychology. 2 Cr. The student will devote a minimum of 360 clock hours, full time (one quarter) in supervised internship experiences. The student will be working with a certified school psychologist in local area schools and/or other approved personnel in other approved situations; e.g., a counseling psychologist in the APA approved University Counseling Center. School psychologist trainees should complete 8 semester hours of internship experiences. This course may be repeated.

413-665 Organization and Administration of Pupil Personnel Services. 2 Cr. A study of the pupil personnel services staff in terms of unique, related and integrated functions. Review of organizational and administrative relations and structures of pupil services. Field experiences designed to promote the growth and understanding of students desiring to become system or district directors of pupil services. Prerequisite: 413-565.

413-690 Multiple Counseling and Sensitivity Training. 2 Cr. A laboratory experience in the analysis and application of group dynamics and group behavior as related to attitude and behavior change. The origin of conflict, cooperation and misunderstanding within groups. Developing insight and sensitivity towards the student's own attitudes, toward other people, their effects on other people and their own motivation and value systems in human relations.

413-695 Supervision of Counselors and Counseling. 2 Cr. Practical applied experiences in the supervision of counseling and counselors; investigation, analysis and application of the psychology of learning and helping as the supervisor assists other personnel services staff in their professional and personal growth and development. Prerequisites: 479-590 and 413-590.

421-430 Education of the Slow Learner. 2 Cr. Study of education for physical, psychological, emotional and behavioral characteristics of the slow learner, the educable retarded student and the disadvantaged. Implications for educational practice for teachers of high school and junior high school students.

421-441 Education Evaluation. 2 Cr. Types of tests and test questions; the interpretation of test scores and grades by means of simple statistical procedures; methods of grading manipulative work and assigning final grades. (Quarter)

421-470 Conference Leading. 2 Cr. Study of teaching. Study and practice of the principles and techniques of conference leading as an instructional device in vocational education. Prerequisites: 449-304 and 442-304.

421-479 Public Relations. 2 Cr. Defines the public, objectives and media of public relations in industry and education. Provides practice with such tools as new stories and features. Each student carries out an actual publicity program in the community.

421-481 American Higher Education. 2 Cr. An introduction to the ramifications of the American system of higher education including history, philosophy, administration, curriculum, students, teachers, and demands for employment. Undergraduates by permission of the instructor only.

421-495 Personal Learning Experience. 3 Cr. Each student selects the learning experience he wishes to pursue. May be individual or group experience. Group meets with sponsor from time to time when requested by the students. Self-evaluation paper by each student is the only requirement. Learning experiences, both individual and group, organized and directed entirely by the students. By permission only.

421-496 Mental Health in the Schools. 2 Cr. A study of the total school community in terms of factors and dynamics contributing to the development or hindrance of the mental health of students, staff, administration and parents.

421-500 Philosophy of Modern Education. 2 Cr. A comparative study of the main schools of educational philosophy and of their influence in contemporary education, thought, and practice, points of agreement and of conflict.

421-502 Principles of Supervision. 2 Cr. Basic principles, types, functions, organization, and plans of supervision. Interpretation and application of creative supervision plans; individual and class projects concerned with applied methods of supervision in selected educational areas.

421-505 Social Thought of American Educators. 2 Cr. The school as a social institution within American democracy. Contributions of the past to education and current philosophies. Historical review, evaluation and consideration of the public school as a social institution.

421-514 Teaching Strategies. 4 Cr. Intensive study and practice in mediating the learning process. Focus on the individual teacher and his active role as an instrument which can bring about predictable changes in student cognitive behavior. Minor consideration given to affective and psychomotor behavior. Lecture, discussion and micro-teaching.

421-516 Educational Evaluation. 2 Cr. Types of tests and test questions; the interpretation of test scores and grades by means of simple statistical procedures; methods of grading manipulative work and assigning final grades. (Quarter)

421-526 Administration. 2 Cr. Philosophy and principles underlying organization and operation of public education on the local, state, and national levels in the United States. Examinations of prevailing practices and current problems of school management.

421-527 Supervision of Student Teachers. 2 Cr. Purposes and philosophy of supervision, the role of the cadet center in preparing teachers, relationships, and responsibilities of persons involved, orientation, guidance, and evaluation of student teachers.

421-533 Survey Procedures. 2 Cr. Procedures and organization for conducting surveys. Application of principles by making and writing the report of an actual survey. Prerequisite: 421-540.

421-538 Elementary School Curriculum. 2 Cr. A study of the social, economic, and educational forces operating to bring about changes in the curriculum of the elementary school. Outstanding state and local curriculum construction programs. Observation and evaluation of the modern elementary school curriculum.

421-539 High School Curriculum. 2 Cr. A study of the social, economic and educational forces operating to bring about changes in the curriculum of the secondary school. Outstanding state and local curriculum construction programs. Observation and evaluation of the modern high shcool curriculum.

421-540 Research Foundations. 4 Cr. The research process. Principles of data analysis and interpretation. Applications of basic statistical concepts to research problems. Development and defense of a research proposal.

421-541 Basic Research Design. 3 Cr. Analysis of data and measures of reliability of results. Emphasis on methods applicable to research by means of experiments. Design of experiments to secure maximum information from the research. A thorough elementary discussion of the basic ideas in experimental design. Prerequisite: 421-540.

421-550 Curriculum Theory and Practice. 2 Cr. A study of curriculum theory and its application. An analysis and development of a rationale, writing educational objectives, identifying a body of knowledge, specifying methodology, and conducting curriculum evaluation.

421-561 Educational Statistics. 2 Cr. Methods of collecting, recording evaluation, and interpreting data. Illustrative problems in education, business, and industry at the practical and research levels.

421-562 Inferential Statistics. 3 Cr. Probability and statistical inference. The general value of the standard error and hypothesis testing. Emphasis on the foundation of analysis of variance and the factorial analysis of variance with three or more variables. The inferential statistics course is organized to acquaint the student with the theoretical bases and the applications of analysis of variance for research problems. Prerequisite: 421-540.

421-563 Sampling Techniques. 3 Cr. The basic sampling model for equal probability selection; basic sampling methods. Simple and stratified random sampling. Generalizations of the basic sampling model. Common applications of the general theory. Estimations of sample size. The basic sampling techniques course is organized to provide the tools necessary for understanding sampling theory and drawing representative samples from identified populations. Prerequisite: 421-540.

421-570 Thesis — Counseling and Personnel Services. 6 Cr. Independent research on thesis under direction of investigation adviser. Selection of problems, development of outline, review of literature, compilation of bibliography, plan of method of attack, conduct of research, interpretation of findings, and preparation of the final paper according to thesis standards. Student may enroll for 2, 4, or 6 semester hours of credit for a final total of six. Prerequisite: 421-540.

421-611 Structuring Knowledge. 2 Cr. Study of methods for structuring knowledge. Relationships between the structure and its application. Structure of knowledge, discipline and curriculum relationships.

421-616 Instrumentation for Research. 3 Cr. Review of the various discrimination techniques including the use of the biserial, point-biserial, phi and tetrachoric correlation coefficients. Emphasis will be placed on methods of an-

alysis of variance to ascertain internal consistency. Basic concepts of item writing, item analysis and scaling will be covered. The student will engage in the study of procedures and techniques in the gathering, analysis and reporting of data and findings as applied to his proposed field study.

442-430 Concepts of Extension Education. 3 Cr. Study of the concepts and processes involved in conducting educational programs for adult and youth; includes philosophy, objectives and organization of Extension Education, leadership development, program development, teaching methods and evaluation.

442-508 Curriculum Studies in Home Economics. 2 Cr. Principles of curriculum construction. Review of recent literature on curriculum development. Evaluation of curriculum practice and techniques. Students may work on own curriculum problems.

442-512 Home Economics for the Junior High School. 3 Cr. Principles of curriculum development for the home economics program in the Junior high school. Emphasis on recent research, philosophy, and emerging practices in program patterns.

442-544 Seminar in Home Economics Education. 2 Cr. Readings, discussions, and reports of recent literature in education with implications for teaching home economics. Paper on individual problem.

442-544 Seminar #1 New Developments in Curriculum Construction. 2 Cr. A study of new developments which relate home economics and education as they concern curriculum construction.

442-544 Seminar #2 New Developments in Methods and Materials. 2 Cr. A study of new developments of methods and materials appropriate for home economics education.

442-544 Seminar #3 New Development in Departmental Planning. 2 Cr. A study of the concepts of space and equipment and development of principles and guidelines of home economics departmental planning.

442-544 Seminar #4 College Teaching in Home Economics. 2 Cr. Educational techniques, methods and materials especially applicable to college teaching in home economics.

442-544 Seminar #5 Individualized Instruction. 2 Cr. Study of the multi-role of the home economics teacher in the guidance of the home economics students in the classroom.

442-544 Seminar #7 Auxiliary Workers in Home Economics. 2 Cr. A national trend toward employment of para-professionals or auxiliary workers is observed in many areas of labor. An exploration of these possibilities in home economics and plans for their education will be foci of this new course.

442-570 Thesis — Home Economics Education. 6 Cr. Independent research under direction of investigation adviser. Selection of problems, development of outline, review of literature, compilation of bibliography, plan of method of attack, conduct of research, interpretation of findings, and preparation of the final paper according to thesis standards. Student may enroll for 2, 4, or 6 semester hours of credit in various terms with a final total of 6. Prerequisite: 421-540.

442-575 Problems in Home Economics Education. 2 Cr. Identification, selection, and completion of a problem in Home Economics Education, culminating in a Plan B paper. Prerequisite: 421-540.

449-504 History of Industrial Education. 2 Cr. Evolution of modern industrial education through the people, movements, events and institutions that contributed to its formation.

449-508 Issues in Industrial Arts. 2 Cr. A seminar dealing with selected current issues in industrial arts. Developments of abilities to develop a position and defend it, to be critical without being offensive, and to be professional in an emotional atmosphere.

449-510 Curricular Innovations Affecting Industrial Arts. 2 Cr. Study of current innovative programs and practices in industrial arts.

449-535 Problems in Industrial Education. 2 Cr. Identification, selection, and the completion of a problem in Industrial Education, culminating in a Plan B paper. Prerequisite: 421-540.

449-538 Course Construction in Industrial Education. 2 Cr. Directed experience in curriculum development and course of study construction for industrial education teachers. Experiences in developing behavioral objectives and in the development of instructional materials which will lead to the realization of these objectives. A vehicle of instruction will be the development of a course of study, instructional package, and/or unit of instruction. Prerequisite: 421-539.

449-540 Synthesis of Problems in Industry and Technology. 2 Cr. A synthesizing and professionalizing experience with the substance of 100-540, Introduction to Problems in Industry and Technology as the base. Preparation and presentation of oral and written reports, evaluation of experiences. Satisfactory completion of the seminar paper for this course may constitute meeting the Plan B requirements for the master of science degree with a major in Industrial Education. Prerequisites: 100-540 and 421-540.

449-570 Thesis — Industrial Education. 6 Cr. Independent research under direction of investigation adviser. Selection of problems, development of outline, review of literature, compilation of bibliography, plan of method of attack, conduct of research, interpretation of findings, and preparation of the final paper according to thesis standards. Student may enroll for 2, 4, or 6 semester hours of credit in various terms with a final total of 6. Prerequisite: 421-540.

459-403 Physical Disability and Work. 3 Cr. Etiology, diagnosis, treatment, prognosis, and vocational implications of physical disabilities.

459-480 Principles of Rehabilitation Counseling. 2 Cr. This course is designed to introduce the student to the principles of rehabilitation counseling and their application to the total rehabilitation process. Emphasis is upon the principles of case-management and the procedures practiced in the state-federal system of vocational rehabilitation.

459-508 Practicum in Work Evaluation. 2 Cr. This course provides for supervised practical experience in work evaluation. Students are assigned clients for whom they must evaluate and/or counsel utilizing work samples, standardized psychometric tests and behavioral observation.

459-509 Practicum in Rehabilitation Counseling. 2 Cr. This course is designed to provide supervised practice in rehabilitation counseling within a district office of the Division of Vocational Rehabilitation.

459-517 Occupational Analysis and Information. 2 Cr. Classification of occupations based on different criteria, methods of obtaining occupational information, methods of job analysis and establishment of work requirements. Emphasis of courses on the needs, abilities and limitations of disabled persons.

459-523 Procedures of Vocational Evaluation. 2 Cr. Methods of evaluating disabled persons in a workshop setting.

459-538 Psychological Disability and Work. 3 Cr. Etiology, diagnosis, treatment, prognosis and vocational implications of psychiatric disabilities, mental retardation, and brain damage.

459-553 Procedures of Work Adjustment. 2 Cr. Methods of affecting adjustment in the work personality of the handicapped, concerning such factors as effective work habits, motivational habits, attitude, and responsibility. Methods of job training in rehabilitation facilities. Methods of effective workshop management. Field trips to rehabilitation facilities and industries.

459-555 Problems in Vocational Rehabilitation. 2 Cr. Identification, selection and completion of a problem in the specialization area of vocational evaluation. The problem project will culminate in a Plan B paper. Prerequisite: 421-540.

459-570 Thesis — Vocational Rehabilitation. 6 Cr. Independent research under direction of investigation adviser. Selection of problems, development of outline, review of literature, compilation of bibliography, plan of method of attack, conduct of research, interpretation of findings, and preparation of the final paper according to thesis standards. Student may enroll for 2, 4, or 6 semester hours of credit in various terms with a final total of 6. Prerequisite: 421-540.

459-580 Administration in Work Evaluation. 2 Cr. A lecture course covering the administrative aspects and methods involved in establishing and supervising a vocational evaluation unit or a total rehabilitation facility.

459-583 Internship in Work Evaluation. 4 Cr. Supervised ten-week field practice in the techniques of vocational evaluation and work adjustment procedures. To be completed at selected vocational rehabilitation facilities capable of offering the student an adequate field experience.

459-584 Internship in Rehabilitation Counseling. 4-8 Cr. Supervised field practice in the methods and process of rehabilitation counseling. To be completed at selected rehabilitation agency capable of providing an appropriate field experience.

459-585 Counseling Technique. 2 Cr. Study of different theories and approaches to counseling practice. Emphasis is on the techniques applicable to working with handicapped persons in rehabilitation facilities.

459-586 Seminar—Vocational Rehabilitation. 1-2 Cr. A seminar course devoted to the field of vocational rehabilitation and subject materials pertinent to the field. May be repeated.

459-599 Independent Study in Vocational Rehabilitation. 2-3 Cr. This course is designed to provide the student an opportunity to independently pursue studies in areas of special interest within the field of vocational rehabilitation.

469-402 Principles of Vocational, Technical and Adult Education. 2 Cr. Philosophy, organization and administration of vocational and adult education in the nation with special attention given to the Wisconsin program; federal and state laws affecting vocational education; coordination.

469-460 Cooperative Occupational Education Programs. 2 Cr. Philosophy, organization, coordination and teaching techniques of cooperative education programs in the various vocational areas. Roles, responsibilities and duties of the cooperative teacher coordinator.

469-474 Adult Education. 2 Cr. Philosophy and history of adult education movement in the United States. Technique of teaching adults including psychological factors, methods, adult interests and characteristics.

469-509 Problems in Teaching Vocational and Adult Education. 2 Cr. Analysis of problems confronting experienced teachers; development of tentative solutions; planning community programs. Prerequisites: 449-402 and 449-404 and at least one year teaching vocational and/or adult education. Approval of the major adviser required prior to enrollment.

469-510 Coordination. 2 Cr. Principles of coordination in vocational and adult education, including apprenticeship training, business education, distributive education, home economics, trade and industrial education, and diversified occupations. Prerequisite: 469-402. (Quarter)

469-515 Technical Education Programs. 2 Cr. Philosophy, principles, operation, and structure of technical education programs at the post-high school level. Prerequisite: 469-402. (Quarter)

469-536 Problems in Vocational Education. 2 Cr. Identification, selection, and completion of a problem in Vocational Education, culminating in a Plan B paper. Prerequisite: 421-540.

469-558 Seminars in Vocational Education. 2-6 Cr. Special topics on current developments in the field. Each seminar devoted to a specific development to be indicated with subtitle and description.

469-570 Thesis — Vocational Education. 6 Cr. Independent research under direction of investigation adviser. Selection of problems, development of outline, review of literature, compilation of bibliography, plan of method of attack, conduct of research, interpretation of findings, and preparation of the final paper according to thesis standards. Student may enroll for 2, 4, or 6 semester hours of credit in various terms with a final total of 6. Prerequisite: 421-540.

469-573 Problems in Coordination. 2 Cr. Advanced study of principles and problems in vocational and technical school coordination through individual research. Prerequisites: 469-510 and 469-402.

469-584 Internship — Local Vocational Education Coordinator (LVEC). 4-8 Cr. Supervised field practice in local vocational education coordination. To be completed at selected schools or CESA agencies capable of providing appropriate experiences. (Quarter or Semester)

469-592 Administration of Vocational, Technical and Adult Education. 2 Cr. Vocational-technical and adult school operation, legal status, policy making, staff personnel, student personnel, programs, public relations, physical plant, business management.

479-350 Adolescent Psychology. 3 Cr. The physical, emotional, social, moral, and intellectual development of secondary school youth. Prerequisite: 479-123.

479-352 Child Psychology. 3 Cr. Psychological development of children. Emphasis on age groups spanning the preschool and the pre-pubescent child; methods for scientific measurement and understanding of child behavior.

479-431 Abnormal Psychology. 3 Cr. A study of more serious mental disturbances. Emphasis on the growing importance of mental disorders and on their early detection and referral.

479-432 Psychology of the Exceptional Child. 2 Cr. Guidance of the learning and development of children who deviate from the normal, the mentally retarded, gifted, socially and emotionally disturbed, and those with visual, speech and orthopedic problems. (Quarter or Semester)

479-433 Mental Retardation and Behavioral Disabilities. 2 Cr. A multidisciplinary overview of the areas of mental retardation and the behavioral disabilities of the age group fourteen and over. Emphasis on the current conceptualization of etiology, remedial programs and habilitation/rehabilitation.

479-455 Human Relations in the Community. 2 Cr. Consideration of the social, psychological, medical, physical, spiritual and interpersonal aspects of growing into responsible adulthood. (Summer Session only).

479-465 Psychology of Reading. 2 Cr. A multi-sensory approach to reading development and the remediation of reading disorders.

479-513 Personality. 2 Cr. The nature of personality and the conditions which make for its wholesome development, its maintenance and integration. Personality inventories used for self-analysis.

479-543 Advanced Individual Mental Testing. 2 Cr. Diagnostic and remedial approaches to learning difficulties in educational settings. Prerequisite: 413-541.

479-555 Advanced Psychology of Learning. 2 Cr. The nature, theories, principles, forms and conditions of learning. Acquisitions, retention, transfer, and related phenomena. Applications are made.

479-601 Psychology of Development. 3 Cr. Investigation of individual man, his natures, and development, with primary emphasis on the self and implications for education. Study aimed at analysis, synthesis, and evaluation levels through seminar approach.

STUDENT PROGRESS SHEET

EVENT	WHEN COMPLETED	DATE COMPLETED
Make **application for admission** to the Graduate College (Form available in Graduate Office.)	At least 30 days prior to first term you plan to take a graduate course. Once admitted, you need make no further application unless you wish to change majors.	
Request that all **transcripts** of work completed at other colleges be sent to the Graduate College, Stout State University.	At time application for admission to the Graduate College is made.	
Complete **Graduate Record Examination** (GRE), general aptitude section. (Application form available from Graduate Office.)	Preferably prior to admission, but required no later than during first term of attendance in graduate work.	
Receive **Notification of Admission** to a degree program. (Form sent from Graduate Office.)	Within two weeks after all needed materials are received by the Graduate Office.	
Develop degree **Program Plan** (Form available from advisor.)	**Tentative** program at first term of enrollment, **final** plan required with degree candidacy application.	
Register for classes each term. (Materials available from registrar.)	Pre-register as announced by registrar each term **or** on first day of session according to directions.	
Begin research, Plan A or B (Brochure available in Graduate Office.)	May be started during **Research Foundations** (421-540), see advisor for details.	
Apply for **Degree Candidacy.** (Form available in Graduate Office.)	After completing nine credits of graduate work, may not enroll for final six credits until admitted to candidacy.	
Request **transfer of graduate credits** from another university. (Form available in Graduate Office.)	As soon as credits are completed, actual transfer is made at time of approval of degree candidacy.	
File **Intent to Graduate.** (Form available in Graduate Office.)	By end of second week of term in which you expect to complete your degree.	
Obtain **Instructions for Graduation.** (Will be sent to all who file an "intent to graduate" during a given term.)	Near end of term in which you plan to graduate.	
File one copy of **Research Paper and Abstract** with Graduate Office. (Instructions for typing and reproduction available in Graduate Office.)	By end of term in which you expect to graduate. This is just like any other course requirement; until it is in, you will not have completed your degree requirements.	
Supply information for **Placement Credentials.** (Information available from Placement Office.)	During last term of enrollment.	
Supply **photograph** of self to Graduate Office. (Any recognizable photo will do; it is only for use in remembering you in future correspondence.)	Any time during enrollment, preferably early in your career.	
Receive **Diploma and Transcripts.**	After all records are clear and degree requirements met, you will receive your diploma and a transcript from the registrar.	

COMPLETE BOTH SIDES: FILL IN OR MARK "X" AS INDICATED — **Application for Admission GC-III (72)**

Name: Last, First, Middle	Maiden Surname	Social Security Number	Applicant's Signature	Mo., Day, Yr. of This Application

Present Address	Number and Street	City, County, State	Zip Code	Telephone: Area/Number	
Permanent Address	Number and Street	City, County, State	Zip Code	From: Mo, Day, Yr. / To: Mo, Day, Yr.	Earliest Mo & Yr You Plan to Enter
Previous Permanent Address	Number and Street	City, State	Zip Code	From: Mo, Day, Yr. / To: Mo, Day, Yr.	

☐ Single Male
☐ Single Female
☐ Married Male
☐ Married Female

Month, Day, Year of Birth

City, State of Birth

Country of Citizenship

Claim legal Wisconsin residence . . . . . Yes ☐ No ☐

Claim exemption from non-resident tuition . . . . . Yes ☐ No ☐

Living in Wisconsin primarily to go to college. . . . . Yes ☐ No ☐

List last two years you filed Wisconsin Income Tax . . . 19___, 19___

A. Hold valid teaching certificate ☐

B. Qualified (or will be) for teaching ☐

C. Not qualified for teaching ☐

Name of state to which A or B applies.

EDUCATION: List in order, beginning with last or present, all colleges attended (if not yet graduated, list anticipated date and degree). Use an additional sheet if necessary.

Name of College	City	State	Dates Attended Mo/Yr to Mo/Yr	Graduated Mo/Yr	Degree Abbreviation	Major	Minor
			to				
			to				
			to				
			to				
			to				

EXPERIENCE & REFERENCES
Complete on reverse side

GOAL
Mark "X" for only one

☐ To earn a degree or certification (Program student) Indicate program in the block to the right.

☐ To take graduate work for upgrading, transfer or simply to extend education. (Non-program student)

NOTE: Program applicants must request registrar of all colleges attended, except Stout, to send us an official transcript. If non-program applicants do not request an official transcript showing degree granted, a Registrar's Statement form will be sent.

PROGRAM: Degree or certification applicants must indicate program desired; mark "X" for only one program.

☐ MS in A-V Communications

☐ MS in Guidance (Must also indicate concentration below)
- ☐ Elm. School Counseling
- ☐ Employment Counseling
- ☐ Sec. School Counseling
- ☐ Voc-Tech School Counseling

☐ Guidance–Professional School Counselor Life Certification

☐ MS in Home Economics–Clothing, Textiles & Related Art

☐ MS in Home Economics Education

☐ MS in Home Economics–Food Science and Nutrition

☐ MS in Industrial Education

☐ MS in Industrial Technology

☐ MSEd in School Psychology (Provisional Certification)

☐ Certification–School Psychologist I

☐ Certification–School Psychologist II

☐ MS in Vocational Education

☐ MS in Vocational Rehabilitation

☐ EdS in Guidance and Counseling

☐ EdS in Industrial and Vocational Education

After completing both sides send this to:

Admissions Office
The Graduate College
University of Wisconsin–Stout
Menomonie, Wisconsin 54751

For office use only

Admitted ____ Probation ____ Provisional ____ Trial ____ Split ____ Denied ____

(OVER)

Name: Last, First, Middle

OCCUPATIONAL EXPERIENCE: Business, Government; Military, and/or Teaching; list last four beginning with present or most recent.

Dates Mo., Yr. to Mo., Yr.	Employer Name, Street, City, State, Zip Code	Nature of Work

REFERENCES: List requested information for two administrators or supervisors to whom inquiry can be made concerning your experience and potential. Do not ask them to write us until requested to do so.

Name	Position	Street, City, State, Zip Code	Nature of Work & Relationship

EDUCATIONAL AND PROFESSIONAL GOALS: In the space below, write a statement expressing your long term educational and professional goals.